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ABSTRACT

This study examines the relationship between professional and political orientations as they emerge under specific educational and environmental conditions existing within the Universidad de Oriente, an experimental university in Venezuela. Based on a thorough review of available relevant theoretical propositions, and employing highly differentiated set of analytical procedures, the study arrives at a number of important findings on how and under what conditions professional and political efficacy are interrelated. Some of the principal findings are: 1) successful and satisfactory training experiences within the university are positively associated with a strong sense of professional efficacy; 2) institutionalized prestige of a field is substantially associated with a feeling of professional efficacy; 3) institutionalized prestige of a field is negatively correlated with student-teacher interaction and satisfaction with reward systems; 4) internal reward systems and student-teacher interaction patterns are greatly conditioned by the university's standing in the society and by the future status different departments can offer; 5) a sense of competency developed in the professional realm is positively associated with students' concepts of themselves as political actors; 6) the politically competent student is likely to be a more active and democratic citizen; and 7) intense involvement in the political realm is associated with expressions of confidence and optimism, (Author/NF)

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THE IMPACT OF UNIVERSITY SOCIAL STRUCTURE ON STUDENT ALIENATION: A VENEZUELAN STUDY

By Robert F. Arnove

ESCA-4

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Stanford International Development Education Center (SIDEC)

School of Education

Stanford University

Stanford, California, U.S.A.

1970

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DEDICATION

To the heat, insects, and mosquitos of Oriente -- and to
Nita and Victoria who survived them.

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FOREWORD

by Hans N. Weiler

As part of the SIDEC research program on the role of education in the formation of social and civic attitudes, Robert F. Arnove has undertaken a study on what is probably one of the most complex, and least understood, aspects of this vast research area: the relationship between professional and political orientations as they emerge under specified educational and other environmental conditions. Based on a thorough review of available and relevant theoretical propositions, and employing a highly differentiated set of analytical procedures, the study arrives at a number of important findings on how, and under what conditions, professional and political efficacy are interrelated. In identifying these relationships, Arnove has significantly enhanced our understanding of the sources and conditions of student alienation.

Within the SIDEC research program, studies are currently in progress which attempt to test further some of Arnove's assumptions in significantly different cultural and educational settings. It is expected that the comparative nature of such interpretations will further strengthen our ability to explain the complex processes of political and professional socialization.

Stanford, California
January 1970

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I am indebted to Myron Glazer and Seymour Lipset for permission to use items from their questionnaires.

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Robert F. Arnove

Stanford, California
July 1969

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CHAPTER I

INTRODUCTION

Problem

Highly trained individuals who can enter key positions in government and industry are central to change in underdeveloped nations. Yet technical competence is not enough; a distinct set of attitudes concerning the responsibilities of such roles and the commitment of students to their societies is also necessary (Nasatir, 1966a, p. 167). Without commitment and optimistic expectations about the efficacy of their actions, university students will remain marginal to rather than dynamic participants in social, political, and economic development.

A critical problem confronting Latin American countries is the failure of the universities to channel students toward specific occupational and political roles required by rapidly modernizing societies. Although data indicate slight shifts in percentages of students attracted to newer scientific and technological careers, the majority of students continue in the more traditional and prestigious professions of law, medicine, and engineering (UNESCO, 1966). At the same time recent surveys conducted on student opinions and attitudes in a number of universities indicate widespread student disaffection from present political regimes and confusion as to their future adult roles in society (for example, see Williamson, 1964).

An experimental university in Venezuela (Universidad de Oriente) was selected for an explanatory study of the ways in which a college social structure -- patterns of student-faculty interaction and reward systems -- could influence student identification with and commitment to occupational and political roles. Through reward systems and other structural features can a university integrate students into societal roles crucial to national development, or by the same means alienate them?

The problem selected for examination was alienation, defined as a sense of low subjective competence or powerlessness (see Seeman, 1959). By choosing the dimension of powerlessness, we distinguished our definition of alienation from those social scientists who refer to dimensions of estrangement or isolation (see Nettler, 1957) or normlessness, characteristic of anomic behavior (see Merton, 1949). Specifically, alienation was studied as student evaluations of their competency to perform future occupational and political roles, and student expectations that their behavior would influence the probability of their success in those areas.

We argued that universities could most directly influence the student's sense of competency or efficacy through preparing him adequately for his future career. When students have opportunities to interact with prestigious role models, receive adequate rewards, and practice professionally relevant tasks, it was hypothesized, student alienation from occupational roles would tend to be low. Conversely, even though many of these factors may be absent, a student would derive a sense of satisfaction and purpose from identifying with a profession which was greatly respected in the society and one whose image was clearly established. For these reasons the following independent variables were selected for analysis:

1) prestige of teachers as role models or "significant others"

2) student-faculty interaction

3) teacher evaluations of students

4) professionally relevant tasks in the curriculum

5) work and apprenticeship opportunities

6) prestige of profession in Venezuelan society

Occupational alienation was also viewed as an independent variable that would be substantially associated with political alienation. We reasoned that failure of the university to develop a sense of competency or efficacy in an area of important ego commitment, preparation for the world of work (see Erikson, 1950), would generalize to the student's evaluation of himself as a political actor.

Rationale and Related Research

University students in developing countries traditionally perform two basic roles, preparing them for positions of elite leadership and service to their societies. These two roles may best be described as 1) the professional-trainee role, in which the student is expected to prepare for his career by the intake of knowledge and then to render services upon graduation through the practice of his profession, and 2) the political-critic role, in which the university student is expected to represent the uncorrupted virtues of youth, rallying against injustice and taking direct action to improve social conditions (see Glazer, 1965).

With the exception of Glazer's study of Chilean university students, few researchers working in Latin America have concerned themselves with the relations between the students' professional and political roles, and the extent to which these roles may be conflictive or mutually supporting. Glazer found high correlations between student professionalism and student political activities that were aimed at national reconstruction. On the other hand, students who ranked low on a professionalism scale also indicated a general withdrawal or indifference to political activities during an exciting period in Chile's political history. These findings suggested that achievement norms in the professional area may be associated with a sense of efficacy in the performance of political roles.

Although a body of research has gradually accumulated (within the United States) on the effects of college education on student values, there has been much less attention directed to the ways in which colleges structure educational experiences to develop student commitments and channel students toward the positions or roles they will eventually assume in society. This type of research is particularly important to countries whose occupational and social structures are rapidly changing.

A promising line of research in this area has been proposed by Meyer (1965). According to Meyer, increasing numbers of important occupational roles in modern society are peculiarly based on college experience: identification with scientific, scholarly, technical and academic roles is acquired especially in the university setting. By contrast, for students committed to traditional and prestigious professions, such as medicine and law, occupational identity usually begins and grows outside the college.

To direct students into these scientific and scholarly roles, colleges must provide gratifying opportunities to learn or play these roles; these opportunities must be over and above those rewards and opportunities provided students with goals outside the college structure. (These college-based opportunities have been problematic in Latin America.) As Meyer notes, for most students, grades, academic prestige, and the approval of professors and peers are indicators of temporary achievement which may facilitate later success. However, for students interested in academically-based occupations, these evaluations and interactions become indicators of success, which may be a permanent part of the students' identity. These evaluations, that is, constitute extremely important sources of gratifications and deprivations (p. 18).

Students in academically-based careers are inevitably more committed to the structures of the college. Since they put more of their egos into the collegiate arena, maintaining their self-esteem requires more positive evaluations and support, than is the case with most students. Failure of the university to gratify the students' ego commitment most likely will result in lowered self-esteem or alienation (p. 18).

The effect of a university social organization on the students' sense of efficacy is further related to the standing and definition of a college in the society. Certain schools and career lines are described by Meyer (1968) as being "chartered" in that they lead directly to esteemed statuses widely legitimated at different points in the social system. Many colleges, however, are not sufficiently prestigious to hold out the promise of future status gains for their students.

Pinner (1964), in his study of student trade unionism in Europe, has looked at this situation from a different viewpoint but has arrived at a basically comparable conclusion. In rapidly changing societies "anticipatory socialization" into a vocation occurs more frequently as professional practice becomes a major avenue to social status. For Pinner, unavailability or unacceptability of role models in the society amounts to blockage of the path toward a desirable future. Under these conditions, anticipatory socialization cannot take place. The student may then turn to the espousal of an ideology which demonstrates the historical wrongness of existing conditions or he may reject his society and his primary milieu, responses which Pinner considers to be indications of alienation.

Student alienation is a persistent theme in the literature on Latin American university students, although few researchers in this area have clearly specified the construct and its attitudinal or behavioral correlates. The clearest definition and most systematic study of the general variable has been undertaken by Seeman in a series of research projects in the United States and Sweden (see Seeman, 1959, 1963, 1966, 1967a, b; Seeman and Evans, 1962).

Seeman's definition of alienation derives principally from the experiments of Rotter (1954, 1966) on social learning in situations of "internal vs. external control of reinforcements" and refers to the specific dimension of powerlessness. He observes that powerlessness is not a construct which necessarily implicates overall personality styles, intellectual capacities, or generalized withdrawal (for example, see Nettler, 1957; and Dean, 1960). Rather it refers to the expectancy or probability held by the individual that his own behavior cannot determine the occurrence of the outcomes or reinforcements he seeks (Seeman, 1959, p. 784; also 1967b, p. 108). In particular, Seeman has applied this concept to expectancies that have to do with the individual's sense of influence in social and political events -- control over the political system, the industrial economy, and international affairs.

Pioneering studies in the area of political efficacy were initiated by the Survey Research Center at the University of Michigan and reported in The Voter Decides (Campbell, Gurin, and Miller, 1954). According to the authors: "Sense of political efficacy may be defined as the feeling that individual political action does have or can have, an impact upon the political process, i.e., that it is worthwhile to perform one's civic duties. It is the feeling that political and social change is possible, and that the individual citizen can play a part in bringing about this change" (pp. 187-88).

In a later study, Easton and Dennis (1967) distinguished a number of elements as comprising the construct of political efficacy: a sense of the direct political potency of the individual; a belief in the responsiveness of the government to the desires of individuals; the idea of the comprehensibility of government (in part a reflection of a degree of general competence and possession of the means or requisite knowledge to alter the political regime); the availability of adequate means to influence the political system; and a general resistance to fatalism about the tractability of government to anyone, ruler or ruled (p. 29).

In many cases, the sense of low subjective competence experienced by the individual may be based on a realistic assessment of prevailing societal conditions: students from lower class families, for example, may be unable to get a hearing in a government office. In the occupational realm, a university graduate may be unable to obtain a job on the basis of his academic qualifications alone. However, several studies conducted by Seeman (1966, 1967b) indicate that individuals who rate high on an alienation scale fail to respond to potentially helpful cues in their environment in areas considered "control relevant" or instrumental to their future.

Although there are limitations to what a university can do to overcome the many conditions affecting student alienation, such as societal opportunities and rewards for practicing a given profession, there is reason to believe that universities nonetheless can exert a positive influence. Glazer (1965, p. 321) cites the case of Chilean university students preparing to become physicists. In spite of the constant warnings from their professors that employment opportunities were extremely unfavorable to them, the students manifested a relatively high level of optimism about their future life chances and a sense of commitment to their profession. Involvement in a rigorous academic program that provided many opportunities to participate in their professional roles and interact with prestigious teachers contributed to their self-confidence.

Studies conducted in the United States tend to indicate that universities highly productive of scientists and scholars may be characterized by personal interaction between students and faculty (see Thislethwaite, 1960; Brown, 1962; Knapp and Goodrich, 1952; Knapp and Greenbaum, 1953). Research on the socialization process which takes place in preparing students for specific professional and technical roles further stresses the importance of prestigious role models and adequate opportunities to participate in professional roles through work and apprenticeship experiences (see Gottlieb, 1961; Merton, Reader, and Kendall, 1957; Becker and Carper, 1956a,b).

RESEARCH PLAN

Questions and Hypotheses

Our research plan was to select a wide range of vocational tracks at the University of Oriente -- varying on dimensions of student-teacher interaction, work experience, and occupational prestige -- in order to discern how alienation would be patterned according to the presence or absence of these independent variables. We predicted that student alienation would be low in highly prestigious departments, such as medicine, where students had ample opportunities to interact with role models and practice professionally relevant tasks. Conversely, we expected students in less prestigious fields, such as sociology, to rank high on alienation, because teachers would tend to be less experienced, and work-related opportunities fewer.

We further expected to isolate points in the students' progression through the University when alienation would be highest or lowest. It was assumed that although students in prestigious professional fields were generally less alienated (or more efficacious) than those in new technical fields, first year students would be more alienated than final year students. We reasoned that premedical students, as a case in point, do not interact with relevant role models. Uncertainty over admission to the School of Medicine and high aspirations would lead to a relatively high level of alienation among beginning students, while alienation would be low in the advanced cycle of medical studies where students had more opportunities to assume their professional role.

In studying the overall pattern of alienation in the University, we were interested in testing four specific hypotheses:

1) When students perceive themselves to have ample opportunities to identify with prestigious and rewarding role models in their specialization, occupational alienation will tend to be low.

2) When students have ample opportunities to identify with occupational roles, through participation in professionally relevant tasks, alienation will tend to be low.

3) When students perceive high social prestige attached to their future occupational roles, alienation will tend to be low.

4) When students are alienated from their prospective occupational roles, they will tend to be alienated from political roles.

Collection of Data

A questionnaire consisting of 140 items, designed to measure our dependent and independent variables as well as gather information on background and related factors, was developed in the field. Data from the questionnaire were supplemented by information gathered from a variety of sources, including university records and publications, prior studies on the students by the Orientation Service and other researchers, and taped interviews with graduating students of the Class of 1968.

The questionnaire was applied to a sample of nearly 900 students on the four regional campuses of the University of Oriente, then offering degree programs. The sample of 887 represents 21 per cent of the students enrolled in the Basic Studies Program ("Cursos Básicos") of the University in April of 1968, and 58 per cent of advanced students in nineteen specializations. Approximately, one-third of the total population of 2,800 students either completed the questionnaire or were interviewed during the study.

Analysis of the Data

In employing a cross-sectional design we were aware of certain limitations. Attitudes of advanced students, for example, might represent the effects of maturation, external events, or selective attrition of the student population, rather than the particular influences of the University.

Certain controls, however, were built into the research design. A sample of students at comparable points in different academic tracks would permit us to ascertain if predicted patterns of alienation persisted among departments, regardless of year of study. The validity of our argument would be strengthened by the extent to which our independent variables tended to appear in stable combinations correlating significantly with our dependent variable (see Becker and Carper, 1956a, p. 347). Our predictions would be further validated if students' feelings of efficacy in the political and professional realms were substantially associated with each other as well as indicators pertaining to student integration into the university and society.

CHAPTER II

THE SETTING AND THE STUDENTS

THE COUNTRY

Strategically located along the northern rim of South America, Venezuela is a large country of immense natural riches and unachieved potential. With a population of only nine million, its national territory of 350,000 square miles is greater than the combined area of the United Kingdom, France, Belgium, Luxembourg, and Switzerland. Over 95 per cent of the population live on the coastal lowlands, Andean highlands, and plains or "llanos" to the north of the Orinoco River, while the highlands and jungles of the Guayana Region to the south contain less than five per cent of the population in 45 per cent of the national territory (see Figure 2.1).

Although all countries are lands of contrasts, Venezuela presents the paradox of being an exceptionally wealthy underdeveloped country. According to the 1960 World Bank Mission, "While Venezuela has an average annual real income level of some U.S. $600 per person, it is estimated that almost half the population lives close to subsistence levels in sharp contrast to the prosperous upper tenth of the nation (International Bank for Reconstruction and Development, 1961, p. 3). A study of the Venezuelan polity, begun in 1963 by the Center for Development Studies of the Universidad Central (CENDES), notes that the country, in spite of its high per capita income, still has 33 per cent of its labor force engaged in agriculture, 14 per cent unemployed, and a proportion occupied in services and construction comparable to that of the most developed countries in the world (Ahumada, 1967, p. 10).

Oil has made Venezuela a country of wealth and paradoxes. With a daily production of over 3.5 million barrels, Venezuela is the world's leading oil exporter; the country is also rich in iron ore deposits. As Gerassi (1967) notes, "From its soil flows about 140 million tons of oil and almost 30 million tons of iron every year. At current prices that should bring the country an income of approximately $4 billion, enough to give each of its ... people almost a Park Avenue standard of living" (p. 158).

Revenues from petroleum and mining operations account for over 90 per cent of the country's foreign exchange, and some 60 per cent of the national budget (which in 1969 will be U.S. $2.5 billion). This sector

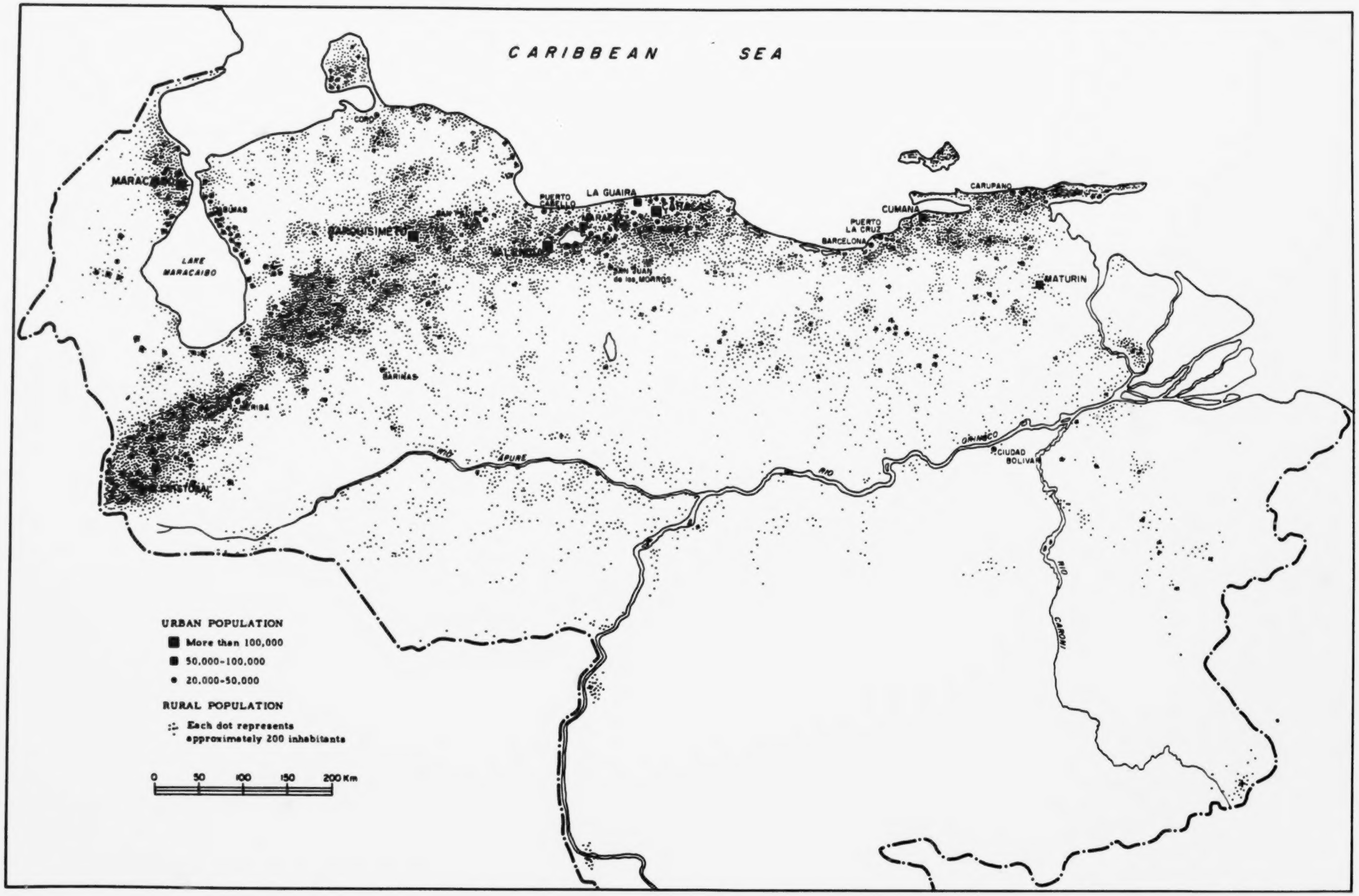
CARIBBEAN SEA
CORO
MARACAIBO
LAKE MARACAIBO
BARQUISIMETO
PUERTO CABELLO
LA GUAIRA
VALENCIA
SAN JUAN de los MORROS
BARCELONA
PUERTO LA CRUZ
CUMANA
CARUPANO
MATURIN
BARINAS
RIO APURE
RIO
ORINOCO
CIUDAD BOLIVAR
RIO CARONI
URBAN POPULATION
More than 100,000
50,000-100,000
20,000-50,000
RURAL POPULATION
Each dot represents approximately 200 inhabitants
0
50
100
150
200 Km

FIGURE 2-1: Population of Venezuela, according to 1960 Census

Source: International Bank for Reconstruction and Development, 1961, p. 6. Reproduced with the permission of Johns Hopkins Press.

of the economy, employing only two per cent of the labor force, contributes 20 per cent to the national product (see International Bank for Reconstruction and Development, 1961, p. 6).

Intensive exploitation of oil began in the mid-1920's by affiliates of United States and Western European companies (principally Standard Oil and Shell). In the following years Venezuela was to undergo the remarkable and jolting transformation from a rural, agricultural country to an urban, industrializing nation.

Social-Economic Change

Between 1936 and 1958, the gross domestic product showed an increase of eight per cent per annum which, according to Ahumada (1967, p. 9) is unique in the entire western world. The population growth accelerated from 2.0 per cent in the 1920's to a high of 3.6 in the 1950's, then tapering off to a vigorous rate of about 2.9 per cent in the mid-1960's.[1] The urban-rural population ratio reversed itself in three decades; by 1966, nearly 70 per cent of the population was in urban concentrations of over 2,500 people. The composition of the labor force was changing with the emergence of a middle sector of entrepreneurs, professionals, technicians, and career military officers. On any number of indicators, social mobilization was occurring at one of the highest rates in the underdeveloped world (see Deutsch, 1961, pp. 507-11).

Political Change

Politically, the country was to undergo upheavals. From 1908 to 1935, the country had been ruled by a military caudillo, Juan Vicénte Gómez, who earned the epithet, "Tyrant from the Andes." Under his iron-fisted rule the country was unified; political opposition was squashed; and regional factionalism, effectively controlled. Unfortunately, Gómez did little to enlighten or improve the lot of the people. As throughout most of the country's history, the land was exploited and the people abandoned.

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[1] A primary factor in the upsurge in the rate of population growth was the decreasing mortality rate brought about by the successful eradication of malaria between 1936 and 1960. In 1935, there were 164 deaths per 100,000 inhabitants due to malaria; the disease claimed the lives of 17,000 out of 113,378 infants born that year. By 1961, there was not a single death attributable to malaria (Marrero, 1964, pp. 226-27).

Oil revenues permitted the enrichment and aggrandizement of Gómez and his ruling clique. At the same time changes were being effected in the society; modernizing groups were coming to the fore that would challenge the ruling power structure and eventually attempt a revolution in the interest of the masses.

With the death of Gómez in December of 1935, the country entered a stage of liberalization and moderate reform under López Contreras and Medina Angarita. Then, in 1945, a revolution spearheaded by Acción Democrática promised to transform the country within a dramatically brief period before itself falling victim to a military coup by Pérez Jiménez. After ten years of the dictatorship of Pérez Jiménez, opposition finally crystallized and the country was led into the democratic present again by Acción Democrática.[2]

Venezuela had broken with her past of tyranny. In 1958 a popular revolution overthrew the military regime of Pérez Jiménez and set out to build a modern nation. Industrialization and land reform were twin pillars of the social democratic movement designed to diversify the economy and extend social justice to the hitherto neglected interior.[3]

The problems confronting the newly elected government of Acción Democrática in 1959 were staggering. A demographic explosion and vast movements of rural populations to the cities without concomitant governmental planning and welfare measures led to social dislocations and widespread disaffection. Heavy dependence on oil distorted the economy and mortgaged the future of the country to a non-renewable product. Almost total neglect of education resulted in the following problems: 40 per cent of the total number of school children (ages 7-14) were not in primary school, illiteracy rates were over 50 per cent of the adult population, and there existed serious shortages of skilled labor in industry and commerce. Unemployment was rampant among the unskilled in urban areas (forming "belts of misery" in the hills or outskirts of cities) and underemployment endemic to the subsistence sector of the rural economy.

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[2] For different historical interpretations of the liberal regimes of López Contreras and Medina Angarita (1936-45) and the subsequent revolution by Acción Democrática and young military officers (1945-48), see Lieuwen (1961, pp. 46-85); Morón (1964, pp. 203-15); and Martz (1966, pp. 56-89).

[3] For diametrically opposed points of view on the achievements of Acción Democrática after 1958, see Alexander (1964); and Gerassi (1967).

Educational Change

In the process of change, education was propelled to the forefront as a key to modernization and equally important as an instrument for consolidating a democratic order and forging national unity. Whatever shortcomings may be attributed to the government of Acción Democrática (1959-68), most critics admit that its principal achievement has been the expansion and reform of an archaic and grossly deficient educational system.

Briefly, emphasis was placed on reforms in the following areas: 1) a significant quantitative increase in the number of students, teachers, and schools at all levels of the education system; 2) increased budgetary allocations to education; 3) extension of social-economic assistance to students; 4) increased educational opportunities with the creation of new branches and specializations at the intermediate and higher educational levels; 5) revised curricula and experimental programs at different levels of the system; 6) expansion of teacher education programs to overcome shortages of certified personnel; 7) development of extra-school educational programs in adult literacy and industrial training; and 8) creation of planning mechanisms in the Ministry of Education.

Expansion of Higher Education

Between 1957-58 and 1965-66, primary education enrollment more than doubled from 751,561 to 1,481,333; middle education more than tripled from 83,811 to 298,073; and higher education increased at the highest rate of any level (Ministerio de Educación, 1967). The national universities, which suffered repeated discriminatory attacks by Pérez Jiménez, expanded from 10,270 to 43,997 students. The national teachers college (Instituto Pedagócico de Caracas), severely undermined during the preceding period, grew from an enrollment of 346 to more than 2,500 students within a decade.

In addition to the expansion of existing university facilities, the Provisional Government of 1958 and the subsequent coalition governments formed under Acción Democrática founded three new universities (Carabobo, Oriente, and Lara), an experimental teachers college (Instituto Pedagógico Experimental de Barquisimeto), and a polytechnic institute (Instituto Politécnico de Barquisimeto). An experimental regional college for the Federal District and metropolitan zone of the country is planned to open in 1969.[4]

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[4] In 1968, there were six state universities -- Universidad Central de Venezuela (UCV), Universidad de Los Andes (ULA), Universidad de Zulia (LUZ), Universidad de Carabobo (UC), Universidad de Oriente (UDO), Universidad de Lara (UL). There were two private universities

1✓

The distribution of university students among different fields of specialization is presented in Table II.1 Although notable advances have been made, especially with the opening of science faculties, the percentage of students in fields critical to the development of the country, such as agronomy and veterinary medicine, remains small (3.9 and 2.2 per cent respectively). The traditional field of law, however, continues at basically the same level of 15 per cent of the total.

Problems of Reforming Universities

For the Ministry of Education to reform the curricula of the older universities would be exceedingly difficult because of the autonomy that surrounds these institutions. Whatever influence the government might have exercised over desired changes in the two most prestigious institutions, the Central and the Andes, soon diminished as university students went into virulent opposition to the regime of Rómulo Betancourt, 1959-64.

Opposition of University Youth

Acción Democrática, ironically, became the victim of student movements it sired during the long opposition to Pérez Jiménez. The party founded youth cells in the country's secondary schools and universities, which together with the communists, played a leading role in sparking the 1958 revolt that toppled the dictator (see Washington, 1959).

The young professionals and university students who had been in charge of the underground organization of Acción Democrática were impatient for radical reform. By contrast, Betancourt and most of the older Acción Democrática leaders returned to Venezuela, chastened by their former period of rule 1945-48, and tempered by years of exile in countries where they had come under the influence of the Democratic Left. Betancourt and the old guard opted for a moderate position in 1958 -- their objective was to effect structural changes in the country through legal and peaceful means while attempting to build a broad base of support (see Betancourt, 1963, p. 304; also Alexander, 1964, pp. 267-69).

By 1961, the radical youth wing of the party (Movimiento de Izquierda Revolucionaria) had split with the old guard and joined forces with other political movements bent on hastening the collapse of the

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in Caracas -- Universidad Católica Andrés Bello (UCAB) and Universidad Santa María (USM) -- with plans for a third to be opened in 1969 or 1970. See Figure 2-2.

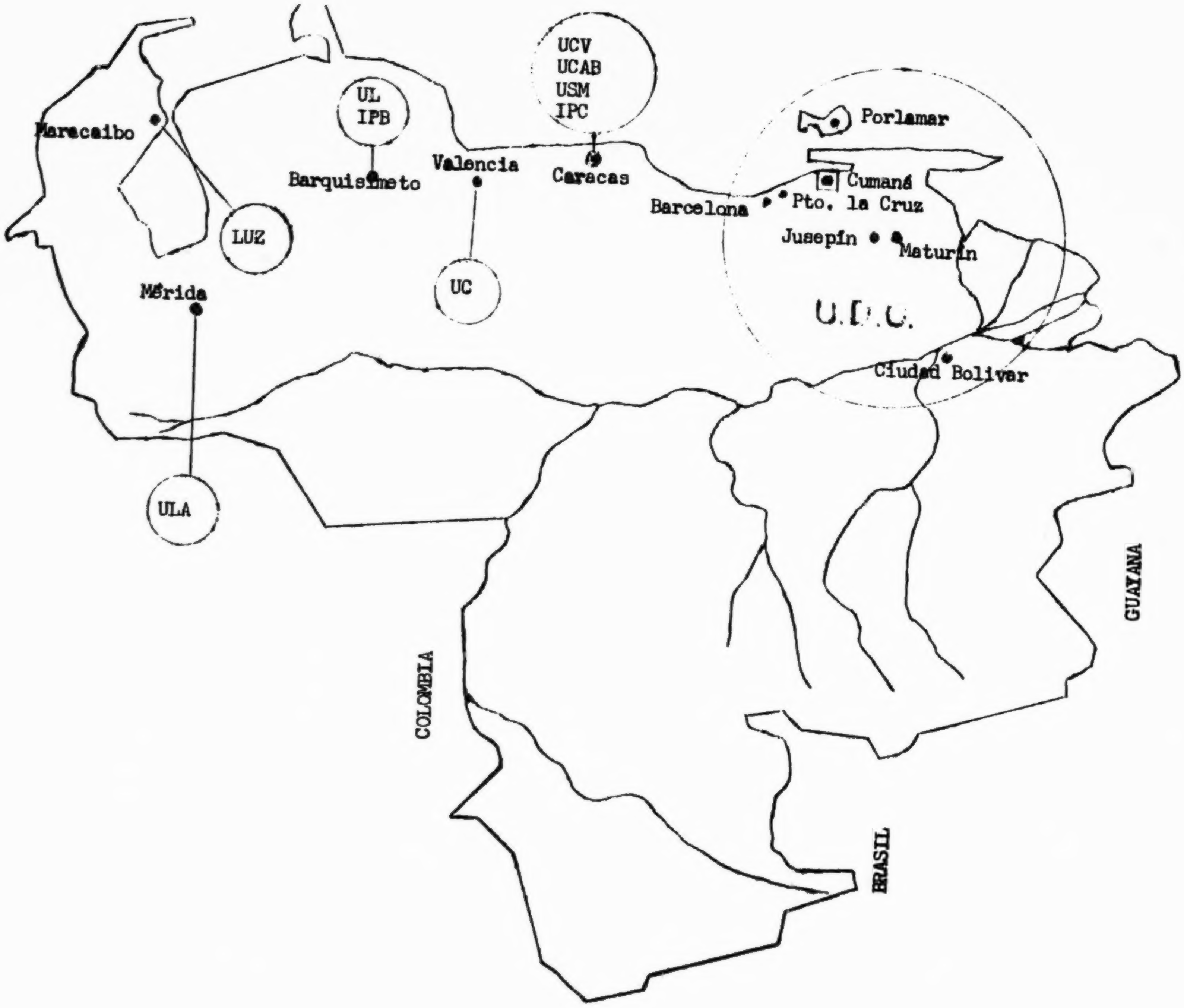
UCV
UCAB
USM
IPC
UL
IPB
Maracaibo
Barquisimeto
Valencia
Caracas
Porlamar
Cumaná
Barcelona
Pto. la Cruz
Juaepín
Maturín
LUZ
UC
Mérida
U.D.O.
Ciudad Bolívar
ULA
GUAYANA
COLOMBIA
BRASIL

FIGURE 2-2: Institutions of Higher Education in Venezuela, 1968[a]

[a] The institutions of higher education in Venezuela and their initials are listed on the preceding page.

Source: University of Oriente, 1968, p. 2.

TABLE II-1

Percentage Distribution of Total University Enrollment in Venezuela according to Fields of Specialization (1955-56 to 1965-66)

	Years		
Specializations	1955-56	1960-61	1965-66
Agronomy	1.95	2.90	3.90
Architecture	3.21	3.45	3.08
Sciences	(-)	1.83	3.62
Law	16.29	16.59	15.01
Economic Sciences	9.15	22.92	19.70
Forestry Sciences	0.69	0.75	0.71
Pharmacy	9.90	2.53	2.66
Humanities and Education	3.00	9.05	15.25
Engineering	19.47	19.11	15.78
Medicine	28.76	15.78	13.55
Dentistry	6.42	2.85	2.43
Veterinary Medicine	1.16	0.96	2.15
Basic Studies	(-)	1.28	2.16
Total	100%	100%	100%

Source: Oficina Central de Coordinación y Planificación (1968, p. 143), citing Yearbooks of the Ministry of Education.

Acción Democrática regime. Some of the youth took to the hills in armed insurrection; others worked to support the urban terrorist activities of the armed forces of national liberation (FALN). The Universidad Central, protected by its autonomy, was often used as an asylum for political fugitives and even as a cache for arms.

UNIVERSIDAD DE ORIENTE

In June 1959, the Ministry of Education established the University of Oriente as an experimental institution with limited autonomy, technical curricula, and regional campuses. The University was to serve as a laboratory for testing institutional and curricular innovations. As the first permanent institution of higher learning in eastern Venezuela, it would meet the development requirements of a long neglected region.

Limited Autonomy

Unlike the national autonomous universities whose governing boards are internally chosen by faculty members and students, the principal administrative officers of the University of Oriente (UDO) -- the Rector, two Vice-Rectors, and General Secretary -- are designated by the Minister of Education. In other essential areas the University is autonomous. Its control over internal affairs -- the development of academic programs; admissions policies; the hiring, promotion, and firing of its faculty -- is guaranteed by national law.

In the area of school financing, the University of Oriente perhaps enjoys greater autonomy than the other national universities, which depend almost exclusively on allocations from the national government. The institution has diversified its sources of financial support by undertaking national fund raising campaigns through a Society of Friends (SAUDO); further income is derived from the rental of public lands granted to the University.

Technical and Experimental Curricula

The curriculum of the University is innovative. Conspicuously absent are degree programs in law, architecture, journalism, humanities, and economics. Emphasis instead has been placed on science and engineering and new applied fields such as animal husbandry. The University also offers a three-year technical degree in engineering as part of the curricula at its Technological Institute (Instituto Tecnológico).

Professional fields have distinctly modern orientations. The Medical School views medicine in largely preventative terms, stressing both its psychological and social dimensions. The School of Education has assumed new directions in training teachers for middle-level technical education.

Basic Studies ("Cursos Básicos")

The University of Oriente is the first institution of higher learning in Venezuela to establish a Basic Studies Program ("Cursos Básicos"), which serves as a bridge between secondary and higher education. A principal objective of the obligatory one- to two-year program is to overcome the deficiencies of the secondary school system of the country by providing an adequate base in the sciences and humanities before the student continues with higher level professional and technical studies. Another objective is to delay the immediate entrance of students into a field of specialization before they have had an opportunity to explore and test their academic and vocational aptitudes.

Moreover, there is a one-year preparatory program ("Cursos pre-Básicos") for students without an academic secondary school degree or a six-year technical school degree. In establishing this special preparatory program, the University has permitted graduates of normal, commercial, and technical school programs of less than five years duration to continue their education in fields which normally would be closed to them.

Departmental Structure

The University has departed from the traditional system of independent and autonomous faculties which offer the full range of courses in a degree program. Instead, the UDO has opted for a more flexible academic organization with departments offering both preprofessional courses for all students as well as professional training for students in specialized areas of knowledge. Engineering students, for example, study their basic courses in physics and mathematics in the School of Science in Cumaná before continuing to the Technological Institute in Puerto La Cruz to specialize in chemical, electrical, mechanical, and petroleum engineering.

Regional Campuses

Probably the most unique institutional feature of the University is its system of regional campuses or "núcleos," named after the five states in which they are located. The "núcleos" are strategically located between the Caribbean island of Margaríta and the river port of Ciudad Bolívar, two hundred miles inland on the Orinoco, in order to provide educational, cultural, and economic stimulus to the entire eastern region.

Oriente, in many respects, is still the most isolated and backward area of the country. In 1966, 28 per cent of the population over 25 years of age was illiterate, compared with the national average of 17 per cent; and 25 per cent of school age children (7-13) in the region were not enrolled in primary schools. Large tracts along the tropical coast and mountain range and the plains to the south are farmed by primitive subsistence techniques; and numerous communities are characterized by what the Northeastern Region Planning Commission calls "paternalistic-magical" values (Nororiente, 1967, p. 57). Traditional values accompany the rural migrant to the city who in search of a better life is often unable to find permanent employment. The regional per capita income of Bs. 2,300 is considerably below the national average of Bs. 4,000.[5]

Each "núcleo" consists of professional and technical schools offering university level degrees in fields of specialization related to the economy of the area, institutes engaged in applied research to increase the utilization of natural resources of the region, and satellite secondary technical schools with three-year training programs to prepare middle level manpower.[6] The different regional campuses further provide in-service training programs for teachers from surrounding secondary schools and extension courses to the nonacademic community in music, dance, literature, and languages.

Núcleo de Sucre

The regional headquarters of the University are located in the Caribbean port of Cumaná, 275 miles east of Caracas. Founded in 1520 by the Spanish, Cumaná is the oldest established city on the South American continent. A fortress was built (which still stands) with a commanding view of the Gulf of Cariaco, where the Spaniards dove for pearls. Missions were founded in the area and institutions of higher learning were begun.

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[5] Data presented on the eastern region is based on the report of the Northeastern Region Planning Commission (Nororiente, 1967).

[6] Eventually all the "núcleos" will offer lower level university degree programs in technical fields as well as postgraduate specializations.

The town, however, was razed on several occasions by earthquakes, and in the years following the wars of independence, Cumaná lost any prominence it enjoyed during the colonial epoch. As late as 1950, the city was without any major road connections with the rest of Venezuela. The majority of its inhabitants were engaged in subsistence fishing and farming. In 1960, with a population of over 65,000, Cumaná was one of the poorest per capita cities in Venezuela.

Since the inauguration of classes in Cumaná in 1960 with 113 students, the city has received a massive influx of students and faculty members from all areas of Venezuela and abroad. Twenty-nine per cent of the 1,200 entering students in 1968 were from other regions of the country. A majority of the 170 professors were from other Latin American countries, North America, Europe, India, and Japan.

With the improvement of transportation and communication networks, the city is gradually entering the main stream of national life, while still displaying many of the characteristics of a backward and traditional area. The population has grown by around 20,000 over the past nine years as inhabitants of surrounding rural areas move into the city, forming slums along the coast or in the hills facing the Caribbean. Unemployment rates definitely exceed the national average of 12 per cent of the labor force. Industry is limited to several fish canneries and a tobacco plant, employing unskilled labor, and a modern flour mill, a subsidiary of a United States company. In addition to the various dependencies of the federal and state governments, a major source of employment in the city is the University, with 475 administrative and service personnel on its payroll in 1968.

Until 1969, "Cursos Básicos" was offered only in Cumaná and, therefore, all students had to attend this campus for the required one- to two-year period. The science departments (comprising biology, chemistry, mathematics, and physics), education, administration, and social sciences are located in Cumaná as well as the Oceanography Institute which is affiliated with UNESCO as a regional training center for the Americas.[7] The Oceanography Institute, in cooperation with the nearby technical-industrial school, has organized a three-year secondary level course to train "perítos pesqueros" (technical assistants to help modernize the fishing industry).

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[7] Beginning in 1969, the Oceanography Institute will be the first school to offer a postgraduate degree in oceanographic studies in Latin America.

Núcleo de Nueva Esparta

The newest campus of the University of Oriente is on the island of Margaríta, three to four hours by ferry across the Gulf of Cariaco and fifteen minutes by airplane from Cumaná. Long famous for its pearls, the primary industries of this picturesque island of 80,000 are tourism and fishing, with handicrafts gaining in importance. In the past, contraband traffic in liquor, cigarettes, and clothing from Trinidad to the eastern coast of Venezuela was a major economic input to the island.[8]

In 1966, the University commenced offering special extension courses on Margaríta in public administration in its largest city, Porlamar (population 25,000). In 1969, the University opened "Cursos Básicos" on a new campus located in Asunción (population 10,000), capital of the State of Nueva Esparta.

Núcleo de Anzoátegui

Fifty miles to the west of Cumaná are the twin cities of Puerto La Cruz and Barcelona. The University's Technological Institute was located in makeshift quarters in Puerto La Cruz until it moved to a new campus midway between the two cities in 1969. The "núcleo" consists of the departments of chemical, electrical, mechanical, and petroleum engineering, and a three-year course for technicians. Plans are under way to open a new specialization in industrial engineering.

Barcelona, an older commercial and administrative center of about 50,000, was once an active entrepôt for trade between the eastern plains ("llanos") and the rest of the country and the Antilles. Its small port was displaced by that of Guanta in Puerto La Cruz, following the discovery of oil on the eastern "llanos" (See Marrero, 1964, pp. 261-62).

Puerto La Cruz, a small fishing community of less than 2,000 in 1936, mushroomed overnight as it became the terminal for the pipe lines of the eastern oil wells and the fifth most important oil exporting port in the world. It is now a city of 75,000 with a large foreign population of Italians, Spaniards, and North Americans.

Although there are several small-scale refineries of United States petroleum companies and an important cement factory in the area, it would

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[8] In order to capitalize on this traffic in goods, the national government plans to make the island of Margarita a free trade zone.

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be difficult to describe Puerto La Cruz and Barcelona as presently constituting an important industrial center. The exploitation of oil has stimulated the rapid growth of the cities without generating a complex of satellite industries. However, because of their favorable geographical location and the natural assets of the surrounding area, the twin cities represent a focal point for the future development of the northeastern region.

Núcleo de Monagas

The Venezuelan plains extend southward from the coastal mountain chain to the Orinoco River. The "Núcleo de Monagas" is located in the center of the eastern "llanos" in an abandoned Creole (Standard) oil camp. The adjacent community of Jusepín is small (3,000 inhabitants) and isolated, owing its existence to the former oil camp. Other than the petroleum industry, the principal economic activity of the immediate area is cattle ranching.[9]

The "núcleo" is a complex consisting of the following entities: the University schools of agricultural engineering and animal husbandry; a community development and settlement center of the agrarian reform; an agricultural and livestock station engaged in production, research, and teaching; and a middle-level school of the Ministry of Agriculture to train agricultural technical assistants. The petroleum engineering department was in Jusepín until 1968, when it moved to Puerto La Cruz. A school of veterinary medicine is presently being organized.

Núcleo de Bolívar

The schools of mining and geological engineering as well as medicine are located in Ciudad Bolívar on the southern bank of the Orinoco River. In 1969, "Cursos Básicos" began in La Sabanita, the University campus on the outskirts of town and former camp of the Orinoco Mining Company (U.S. Steel). The "núcleo" also includes a geological research institute and a cooperative program with the nearby industrial school to offer different career lines in the fields of mining and geology.

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[9] The largest city on the eastern plains is Maturín (population 45,000), approximately one half hour to the east of Jusepín.

Ciudad Bolívar, site of Venezuela's first Constitutional Congress (1819) is now a thriving city of 75,000 plus.[10] It is a warehouse for the Guayana Region and the "llano" country that extends along the banks of the Orinoco. To the south lie the primitive jungles and mountains of the fabled Gran Sabana, setting for W. H. Hudson's *Green Mansions*. Soldiers of fortune still come to the area in search of diamonds and gold.

Unlike other areas of Oriente Province, Ciudad Bolívar has not been shut off from the outside world for lack of connecting arteries of transportation and communication. River traffic placed Ciudad Bolívar in touch with the Antilles and Europe when areas of the same country appeared to be more distant by land. Commerce and international immigration have given rise to an educated, professional class that is sizeable for the provinces.

The principal focus of future development for the region and the entire nation is fifty miles to the east of Ciudad Bolívar, at the confluence of the Orinoco and Caroni Rivers. An urban-industrial complex is emerging in the area of the recently created city of Santo Tomé de Guayana (1962), which combines the populations of the twin cities of Puerto Ordáz and San Félix. The industrial complex includes the State steel mill of Matanzas, a joint public-private aluminum smelter, and complementary steel processing plants.

Natural resources in the area include high grade iron ore, bauxite, petroleum, and natural gas. The hydroelectric dam to the south of Guri is generating enough kilowatts to electrify areas of neighboring Colombia. Another important natural asset is the deep water port which is accessible to ocean going vessels (see International Bank for Reconstruction and Development, 1961, p. 62).

Between 1962 and 1968 the Ciudad Guayana area grew from 40,000 to 115,000 inhabitants. It is estimated that the population of the city will be 500,000 by 1980. The Venezuelan government hopes that the Ciudad Guayana complex will not only serve as a primary stimulus to the industrial diversification of the country but help stem the flow of rural populations to Caracas and the central region.

Full-Time Faculty

Although the University of Oriente is unique among Latin American universities in the high percentage of full-time professors it employs --

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[10] Until 1846, the city was known as Angostura de Orinoco, the narrow point of the River. Bitters were exported from the city in the past; hence, the name Angostura Bitters.

86 per cent of its 365 professors were full-time in 1968 -- the institution has encountered major problems in attracting and retaining qualified personnel. The eastern region is tropical, remote, and without the comforts and diversions of Caracas. Few established professors are willing to undergo the sacrifices involved in abandoning the supportive conditions of the older, more prestigious universities for a new institution that is in the process of building both its facilities and reputation.

From its inception the University has recruited faculty from abroad. As teacher salaries in Venezuela are reputedly the highest in Latin America, the University has been able to attract a number of teachers from Colombia, Chile, Argentina, and Uruguay. Technical assistance programs with foreign foundations and national governments have been instrumental in bringing American and European professors to the University for short-term periods of approximately two years.

One agreement has been with the Ford Foundation and the University of Kansas. Since 1965, Kansas has sent both senior staff advisors and teachers to build up the science departments of Oriente, while a select group of younger faculty from the UDO was sent to the United States for advanced training.

An important agreement with the French Government provides science and engineering teachers, plus a cadre of technicians to help establish a regional planning office (Nororiente) closely allied with the University. The two-year period of overseas work in an underdeveloped country is the equivalent of military service for these young Frenchmen.

An earlier agreement with the United States Peace Corps has brought volunteers to Oriente since 1962. Most of the Peace Corps teachers have worked in language arts, and education.

The University is giving increasing attention to building up a more highly qualified and dedicated staff through selective recruitment of its most promising graduates. Recent graduates are appointed for a one- to two-year period as instructors. They are then sent abroad to universities, such as Kansas, for a masters level program. Upon their return, they are expected to render two years of service for each year of study overseas.[11]

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[11] Forty-two graduates, representing approximately one-fourth of the University's first three graduating classes, were either teaching courses in the institution or studying abroad in 1968.

Full-Time Students

In addition to the University's emphasis on building up departments with full-time faculty, an equally distinctive feature of the institution is the existence of a full-time student body. Each department requires its students to register for a minimal number of course units, which is usually exclusive of any other full-time endeavor. University regulations also specify that students who miss more than 25 per cent of a course will have to repeat the subject.

In order to achieve the goal of a full-time student body, the University provides support in various ways. The Office of Student Affairs on each campus has separate offices concerned with guidance and orientation, financial aids, medical and dental care, and socio-recreational activities.

The student body of the University has grown from 113 in 1960 to over 2,800 in 1968 (see Table II-2) in "Cursos Básicos" and twenty-one fields of specialization. With its fourth graduating class in February of 1968, the University has contributed over 260 professionals to the development of the region and the nation.

THE STUDENTS -- WHO ARE THEY?

Socioeconomic Background

By contrast with student populations at other Venezuelan universities -- and Latin American universities in general -- the majority of students at Oriente are predominantly from lower middle and lower class backgrounds. University officials estimate that roughly 70 per cent of its students are from lower class origins. One measure of socioeconomic status -- a weighted index of family income, educational attainment and occupational status of parents (see Appendix II) -- shows 33 per cent to be unambiguously from the lower class with the largest group (45 per cent) coming from the marginal lower middle class (see Table II-3). Less than one-fourth of the students (22 per cent) can be described as being from definitely middle-to-upper class backgrounds -- and only one per cent of these students come from families where parents have both a university level education and a monthly income of approximately U.S. $1,000 (Bs. 4,500).

The lower middle class students represent a segment of the society that has recently gained status, following the collapse of the military government of Pérez Jiménez in 1958. In many respects, the families of these students are a class in transition, reflecting efforts of the social

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TABLE II-2

Frequency Distribution of Student Enrollment at the University of Oriente according to Fields of Specialization (1st Semester, 1968)

Schools and Departments	Number of Students
Basic Studies ("Cursos Básicos")	1,867
Administration	182
Animal Husbandry	49
Engineering:	
Agriculture	41
Chemical	32
Electrical	61
Geological - Mining	23
Mechanical	40
Petroleum	14
Medicine	225
Science and Education:	
Biology	39
Biology Education	17
Chemistry	17
Chemistry Education	8
Mathematics and Physics	23
Mathematics - Physics Education	33
Technical Education	25
Social Sciences	69
TOTAL	2,765[a]

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[a] There are also 62 students enrolled in a middle-level course to train technicians in the field of mechanical engineering.

Source: Universidad de Oriente, Boletín Estadístico, 1 (II Semestre, 1968), p. 39.

TABLE II-3

Socioeconomic Background of Students

Class	%
Upper	1.4
Upper Middle	5.2
Middle-Middle	15.0
Lower Middle	45.1
Lower	33.4
TOTAL	100%
(Number of Cases)	(887)

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democratic governments of the last ten years to extend economic opportunities to the interior of the country.

Educational Attainment of Parents

Approximately 50 per cent of our subjects report their parents as having little or no formal education. Only one-fourth of the respondents' fathers have experienced any education beyond the primary level, with seven per cent attaining some higher education. Levels of educational attainment are lower for mothers (see Table II-4).

Occupational Status of Parents

Less than one-third of the students' fathers are engaged in professional, managerial, supervisory, and white collar occupations or may be considered large scale businessmen and commercial farmers. The majority of fathers are blue collar workers, small shopkeepers, lower level clerical and service personnel (see Table II-5). Only 13 per cent of the students report their mothers are actively employed.

Family Income

One-fifth of the students come from families where total monthly income is under Bs. 600.[12] One-half of the families earn less than Bs. 1,500. Less than one-fourth of the families enjoy what may be described as middle-to-upper class incomes of over Bs. 2,000 monthly (see Table II-6).

To place these monthly incomes in perspective, it may be helpful to note the following salaries of different personnel employed by the University. An office secretary with several years of secondary commercial school training earns Bs. 600 monthly; a skilled worker (master carpenter), a clerk or technician (for example, an IBM equipment operator) with usually some advanced secondary training earns between Bs. 1,000 and

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[12] The exchange rate is approximately Bs. 4.50 to one United States dollar. Venezuela has a very high cost of living. The 1960 World Bank Mission notes that although GNP is nominally close to U.S. $1,000, the real average income is some U.S. $600, after discounting Venezuela's higher price level (see International Bank for Reconstruction and Development, 1961, p. 3).

TABLE II-4

Educational Attainment of Parents

Level	% Father	% Mother
Illiterate	4.2	4.9
No Formal Schooling - But Literate	3.3	3.4
Primary Incomplete	38.1	46.1
Primary Complete	29.4	28.9
Secondary Incomplete	11.4	8.1
Normal School[a]	1.6	4.8
Secondary Complete	4.7	2.8
University Incomplete	2.8	0.5
University Complete	4.5	0.6
TOTAL	100%	100%
(Number of Cases	(853)	(857)

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[a] Until 1963, a normal school degree program was four years, compared with the five years required for an academic secondary school ("liceo") degree.

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TABLE II-5

Occupational Status of Father according to Hall-Jones Scale of Occupational Prestige of Males[a]

Class		% Father
1.	Professionally Qualified and High Administrative	5.6
2.	Managerial and Executive (with some responsibility for directing and initiating policy)	5.7
3.	Inspectional, Supervisory, and Other Nonmanual (Higher Grade)	11.9
4.	Inspectional, Supervisory, and Other Nonmanual (Lower Grade)	6.5
5(A).	Routine Grades of Nonmanual Work	34.7
5(B).	Skilled Manual	17.1
6.	Manual, Semi-Skilled	16.2
7.	Manual, Routine	2.3
	TOTAL	100%
	(Number of Cases)	(825)

[a] The Hall-Jones Scale of Occupational Prestige of Males was selected primarily for its flexibility and convenience, providing broad categories which we could readily adapt to the particular situation in Venezuela. The Scale served well, considering the tendency for students to offer broad descriptions of their fathers' occupation, such as "comerciante" (businessman) or "agricultor" (farmer). See Hall and Jones (1950).

TABLE II-6

Family Income of Students

Income	%
Less than Bs. 600[a]	19.7
Bs. 600 -Bs. 999	29.2
Bs. 1,000-Bs. 1,499	19.7
Bs. 1,500-Bs. 1,999	9.5
Bs. 2,000-Bs. 2.999	12.0
Bs. 3,000-Bs. 3,999	7.9
Bs. 4,000+	2.9
TOTAL	100%
(Number of Cases)	(856)

[a] Exchange rate -- Bs. 4.50 to one United States dollar.

Bs. 1,500; a part-time graduate instructor with a university level education degree earns about 1,500. The minimum starting salary for most graduate students outside the University will be somewhere around Bs. 2,000.

Family Size and Composition

A small family can live modestly on an income of between Bs. 1,000 and Bs. 1,500.[13] However, 42 per cent of the students report having seven or more siblings (see Table II-7). Most students, therefore, tend to come from large households which continually face economic hardships.

Decomposition of the family authority structure also constitutes a serious problem for many students. In one-third of our cases, the subjects indicate that parents are separated (17 per cent) or one or both are deceased (17 per cent). Twenty per cent report their mother to be the head of the household, in a society where the male traditionally dominates. Another nine per cent report an older sibling, uncle, or grandparent to be responsible for their family (see Table II-9).

The percentage of students reporting one or both parents to be dead appears high. Where a parent has long abandoned the family, student comments reveal that they neither know nor care where the parents live. For these students, the parent (usually the father) is figuratively dead.[14]

Socioeconomic Situation of the Students

An overwhelming concern of students is their precarious economic situation. Over two-thirds believe economic problems could prevent them from completing their studies. They worry to a great extent over the

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[13] An interesting side note is that a single Peace Corps Volunteer, who is expected to live modestly, usually receives a monthly stipend between Bs. 600 and Bs. 700.

[14] In the background of our discussion on family composition and authority structure is the factor of very high illegitimacy rates for the eastern region of Venezuela.

TABLE II-7

Number of Siblings of Students

Number	%
None	2.6
One	4.5
Two	8.3
Three	9.0
Four	10.0
Five	12.2
Six	11.8
Seven	10.9
Eight and More	30.8
TOTAL	100%
(Number of Cases)	(871)

TABLE II-8

Parents Live Together

Item	%
Yes	65.9
No	16.7
One or Both Parent(s) Dead	17.3
TOTAL	100%
(Number of Cases)	(872)

TABLE II-9

Family Head

Item	%
Father	70.6
Mother	20.4
Others	9.0
TOTAL	100%
(Number of Cases)	(833)

sacrifices a university education causes their families.[15] Even when a family does not contribute to the financial support of the student, university studies preclude his being employed and assisting his family.

The majority of students live on a minimal income of between Bs. 300 and Bs. 350. For between Bs. 250 and Bs. 300, the student can obtain room and board in a "pensión," the remaining Bs. 50 are used for bus fare to the University in Cumaná or Ciudad Bolívar, and other expenses.

The University maintains a file of "pensions" which it recommends to students. Coeds who cannot find lodging with relatives or family friends are often recommended to a Church affiliated residence, where they are closely supervised and also find little privacy, sleeping as many as ten to a dormitory room.

In general, living accommodations for students who do not live at home are small, overcrowded, stifling hot, and devoid of most comforts. The University does provide student accommodations in Jusepín, this being required by the isolation of the campus on the eastern plains, and because living units were already available as part of the facilities of the Creole Oil camp donated to the school.

In the past, the University has been reluctant to construct dormitories, fearing the political repercussions of large groupings of unsupervised students in urban concentrations. However, University authorities are beginning to recognize the benefits to be gained from alleviating the negative circumstances of off-campus life. Plans are now under way to construct small residential units on the Puerto La Cruz campus. These units conceivably would have faculty advisors, library and study facilities, a situation which contrasts with the student practice of studying at night in small portable canvas-back chairs under streetlamps in the parks or more quiet streets of the town.

The University has moved more vigorously to assist the students in other areas. The University of Oriente was the first institution of higher learning to initiate national campaigns to raise scholarship monies for its students. In the second semester of 1968, the University provided scholarships to 431 students or 17 per cent of the total student population of 2,586. Temporary loans are available for needy students and the University also provides several hundred transportation scholarships for the daily round-trip bus fare (of about 11 cents) -- which many cannot afford.

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[15] At the extreme we have a student who describes his father as being a poor illiterate fisherman who has toiled all his life to see his daughters through normal school and his son attain a university level education.

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Without the active financial assistance of the University, public and private agencies, many of the students would not be able to attend college. Nearly a fourth of our subjects (23 per cent) depend exclusively on scholarships and loans to support their studies. Fifty-two per cent partially depend on a combination of loans, scholarships, and work to support themselves. Less than half (48 per cent), rely exclusively on their families to support them; for the most part, these are the students living at home.

It is questionable whether many students would be able to continue their education if the University were not located in a city where the student could live at home. Thirty-eight per cent of the students live with their parents, relatives, or friends of their family, which reduces the major expense of attending the University -- tuition being only Bs. 33 a semester (see Table II-11).

The Optimism of Students

Although living conditions are spartan and students are continually harassed by economic problems, there are also pleasant aspects to being a student in a place such as Cumaná. For many, particularly the coeds, university studies represent their first independence from exceptionally strict family supervision. There is a growing student subculture in Cumaná, with soda fountains, bars, and dance places which students frequent. There are fiestas organized throughout the year by the student center. The magnificent beaches of the Caribbean are in the front yard of the University.

More importantly, these students enjoy a certain elite status, which is characteristic of university students throughout the Third World. They are among the very few that successfully attain the heights of a university level education.

In Venezuela, less than half the school age population in the past have continued beyond three years of primary schooling. Out of a cohort of 100 students beginning primary school, statistics from the yearbooks of the Ministry of Education show that less than five complete secondary education. Approximately three out of a starting class of 100 reach the universities.

University students, therefore, truly represent an elite. Although students at Oriente are mainly from lower and lower middle class origins, they identify with middle class status. They represent that portion of the lower classes that has been able to struggle upwards and is now on the verge of occupying the next rung on the social ladder.

Students' subjective social class evaluations show a remarkable degree of consensus. Eighty-seven per cent of the students evaluate

TABLE II-10

Student Monthly Income

Item	%
Student Lives at Home - Less than Bs. 200	16.9
Bs. 200 - Bs. 399	63.3
Bs. 400 - Bs. 599	12.9
Bs. 600 +	6.9
TOTAL	100%
(Number of Cases)	(873)

TABLE II-11

Where Students Live

Item	%
Parents	21.9
Relatives or Friends of Parents	16.0
Student Residence[a]	20.4
Pension	25.8
Apartment (with friends or alone)	11.9
Spouse	4.0
TOTAL	100%
(Number of Cases)	(883)

[a] With the exception of the 70 students on the Jusepín campus, student residence refers to a boarding house that rents exclusively to students.

themselves as belonging to the middle or professional class. Only two per cent identify themselves as being upper class. And as few as 11 per cent consider themselves as belonging to the lower or working class.

Students tend to be both optimistic and guarded about their future standard of living. Twenty-seven per cent believe their standard of living (five years after graduation) will be a lot higher than their family's present level. Sixty-one per cent more cautiously expect it to be somewhat better. Another 12 per cent expect their life style to be basically the same, with only three students out of 887 expecting it to be worse (these students most likely coming from upper class families).

The extent to which these students will be able to fulfill their aspirations depends on their success as students, as well as conditions prevailing in the society -- and particularly in the economy. Approximately one-half (49 per cent) believe their chances of completing their studies are excellent or good. In the second instance, students are less optimistic or certain about job opportunities. Thirty-seven per cent believe their probabilities of finding a desirable job are good; another one-third hedge, by considering their chances to be fair. Twenty-seven per cent are uncertain. However, a few (two per cent) are outright pessimistic about future life chances.

Academic Characteristics of Students

The students' assessments of the probabilities of graduating from the University are realistic. Although these students have successfully survived the high attrition rates of primary and secondary education, few enter the University with excellent academic records or promise of being outstanding students.[16] Most will encounter problems in "Cursos Básicos"

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[16] A study of the 1965 freshman class by Farias (1967, p. 8) shows the percentage distribution of secondary school grade point averages for 409 students:

Classification	Grade Point Average	%
Deficient	10-11	16.8
Regular	12-13	61.8
Good	14-15	17.6
Excellent	16-20	3.6

This classification by Farias is an accurate description of the poor academic record of most entering students.

Scores on aptitude tests show that for a sample of 67 students of the 1965 freshman class who completed the academic year, 79 per cent were at or below the mean on the verbal aptitude test, and 58 per cent having to repeat one or two courses. Approximately one-third will abandon their studies by the end of the freshman year.

The University Memoria (Yearbook) shows that in the first semester of 1967, only 26 per cent of the students in "Cursos Básicos" passed all their subjects -- 41 per cent failed one or two subjects; and 33 per cent failed three or more subjects, thereby being required to repeat the academic year the following January. Of the 1,320 students who began classes in January of 1967, 1,078 returned to enroll the second semester.

Promotion rates tend to be much higher in the professional schools, with one exception. Only 13 per cent of the medical students passed all their subjects in the first semester of 1967. Of the 237 students who initiated the academic year in medicine, 184 enrolled the second semester. The principal cause of academic failure was the preclinical anatomy course, which most students find exceptionally difficult.

Generally, the most difficult subjects for students in "Cursos Básicos" are introductory mathematics, physics, and chemistry. The academic record for the first semester of 1968, shows that 66 per cent of the humanities and 57 per cent of the science students failed their respective introductory mathematics courses. Approximately 40 per cent of the humanities and science students failed physics and about the same percentage had problems with chemistry.

A variety of opportunities are provided for students to make-up subjects. There are make-up examinations ("reparaciónes") given one week after the final examination period. (However, these examinations are usually more difficult, and less than a third of the students pass them.) The term "arrastrar" (to drag a subject) is used to describe the procedure by which a student waits until the following semester to take a special make-up examination. The University also attempts to schedule courses such as introductory mathematics and physics to be offered the second semester so that students will not have to wait an entire year to repeat a subject ("cursos paralelos").[17] During the in-between semester break in November and December, intensive five-week courses are offered for those who must repeat them, and for students who wish to advance their standing in the University.

Despite these opportunities, the process of repeating subjects or waiting to fulfill a requirement before continuing with a higher level

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were at or below the mean on the numerical reasoning test administered by the Orientation Service.

[17] In these cases, students can take second semester courses, except those with a prerequisite that has not been satisfied.

course usually implies the loss of an academic year for many students. University regulations bar a student from beginning the second or advanced cycle of studies until he has completed all course work in Cumaná. We find in our sample that 27 per cent of the subjects have repeated one academic year, and 11 per cent are two or more years behind their entering class.

Being required to repeat a year in the University is a tremendous penalty for students, given their precarious economic situation and the strain on their families. A substantial number either despairing of completing their studies or unable to finance their stay in the University, drop out.

The overall attrition rate for any student cohort, from 1960 to the present, would be around 40 per cent. This is a favorable promotion rate, compared with the 60 per cent attrition rates at the other national universities, but it is still far from realizing the University objectives of receiving the youth of the eastern region and providing them with skills that will contribute to the development of the area, or the equally important aim of developing the potential of each individual.

Those who are economically more advantaged may attempt to transfer to another university, where students enter a professional school in the freshman year. The success of these students in other universities is problematic. Thirteen per cent of the students in our sample have already studied at another university and the most frequently mentioned reason for transferring to Oriente was academic problems. (Other reasons given were economic hardships or the opening of a new specialty in Oriente).

The fate of the majority of dropouts is a subject for speculation and further inquiry. How this negative experience in the university affects their self-concepts would make a fascinating study -- asking, for example, to what extent they consider themselves to be responsible for their failure. Our discussion in the introductory chapter suggests that blockage of student aspirations in the occupational area, as well as denying students the status that accrues to university graduates, would severely impair their self-esteem, leading to lower self-evaluations of efficacy in several related roles.

Student Explanations of Academic Problems

We have a partial insight into how students react to academic problems in their responses to an item asking students to evaluate the extent to which a series of factors influence their academic performance.[18]

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[18] Item: "If you have (or had) academic problems, indicate to what extent the following factors have influenced your academic performance."

Students in our sample are cognizant of their shortcomings and are open about them. Sixty-three per cent would attribute a considerable part of the blame on any academic problems to their inefficient study habits, 49 per cent on lack of concentration or industry.[19] A smaller percentage (37 per cent) believe their own ability to be somewhat or a lot to blame for any failure in the University.

At the same time the students are very articulate about shortcomings within the University that affect their academic performance. Fifty-nine per cent attribute blame to incompetent professors, while 32 per cent believe their teachers unjustly grade them. Fifty-two per cent perceive their excessive academic load as a problem, and 47 per cent indicate that the problem resides with their "uninteresting" courses.

A principal grievance of students and a focal point of agitation is "Cursos Básicos." Many wish to adopt the traditional faculty system. They are impatient to begin their professional studies and fail to see the reasons for taking courses unrelated to their future specialization. Engineering students, for example, complain about having to take sociology; premedical students protest against having to take a physics course which, they claim, is principally for engineers. Moreover, these students resent the fact that they cannot continue studies at another campus because they have not passed a humanities or language course, which they consider to be nonessential.

Although the students frequently view the political affiliation of the University bureaucracy with the national government as being a principal reason for many of the University's defects -- for example, the possibility that a professor may be employed primarily on the basis of his political conformity -- few would directly impute their academic problems to this remote scapegoat. Only sixteen students place major emphasis on social, political, or economic discrimination as a source of their problems, with another forty-eight mentioning this factor as being somewhat important. The situation, however, changes when we review student responses to problems they expect to encounter outside the University.

Students rated such factors as their aptitudes, study methods, and course load on a scale ranging from "a lot" and "somewhat" to "little" or "not at all."

[19] Percentages are based on the total number of cases in the sample (887), rather than the number of respondents to each item, since nonresponses were high (usually about 10 per cent). The "no response" group consisted overwhelmingly of students who stated that they encountered no major academic problem or had no complaints. It also should be noted that the high percentage of students agreeing with the different explanations of their academic problems is due to the closed-alternative structure of the questionnaire item.

Occupational Orientations

Although the University of Oriente is a relatively new and not very prestigious institution, few students believe that their academic preparation is inadequate or that they will be at a disadvantage in competing with graduates from other universities. The principal obstacles to obtaining a job are seen as lack of employment (mentioned by 27 per cent of the respondents as the primary problem), followed in importance by lack of personal contacts (21 per cent), and political influence (13 per cent). Belonging to the right political party is mentioned by 256 students (29 per cent) as being either the first or second most important obstacle they expect to encounter.

Even when students do not view ascriptive factors as presenting problems for them, they do recognize their importance in obtaining a desirable job. Forty per cent of the students evaluated social background, personal contacts, and political activity as being more important than academic record, personal ability, and recommendations of professors in job hunting. When asked what ideally should be the situation in the future, 92 per cent emphasized achievement criteria.

Students rail against these ascriptive factors, which they intend to combat as future professionals and leaders in their communities. Over 90 per cent believe that as university students they have special responsibilities to make a contribution to the development of the country, either by being competent professionals or active change agents. These are general expectations, which are not usually specified in concrete details.

Their fundamental concerns are with 1) the intake of knowledge and preparation for professional roles and 2) with their role in the modernization and development of the country. In response to an open-ended phrase -- "My principal concern is ..." -- 435 students (49 per cent) mention completing their studies and being adequately trained to perform their profession; 261 (29 per cent) described problems of injustice and poverty in Venezuela as being a principal concern.

Over three-fourths (78 per cent) view their university education primarily in instrumental terms of professional preparation and status conferral. These students expect to make a contribution to the development of the country through the input of their knowledge and skills. It is also implicitly understood that a university education is a vehicle for upward mobility. Nineteen per cent place emphasis on cultural enrichment and general knowledge as the first goal of a university education. And three per cent list a combination of goals as being equally important.

When queried about their career plans, 70 per cent state they are committed to a specific professional field, with 46 per cent having a definite preference for the type of work they would like to do (for example, research or teaching). Twelve per cent are exploring a professional field to determine a particular area of work that attracts them. And 19 per cent are undecided about their career plans, but committed to obtaining a university degree.

By the time they enter the University of Oriente, 63 per cent have already given serious thought to pursuing a particular career line. However, "Cursos Básicos" is also a time of change and exploration: 31 per cent answer they first developed a serious interest in their major during this period. Students come into contact with new specializations, interests are awakened, and vocations discovered. At the same time, students learn that initial vocational preferences may not be practical. Many who aspire to study medicine and engineering encounter severe academic problems and seek alternative achievement paths.

Students consistently rank their aptitudes and vocational interests as being the single most important factor influencing their career decisions (see Table II-12). About 40 per cent assign considerable importance to the prestige of a career in Venezuelan society, and the job opportunities that are open to them.

Different role models (peers, parents, high school teachers, and practitioners of a profession) are rated by 15 per cent of the students as having a major impact on their occupational choice. Parents were considered to be the primary influence in four per cent of the cases (for the most part, medical students with a father who is a doctor or working in a related field). This finding diverges from other studies (for example, Glazer, 1965, p. 70) where parents play a relatively more important role in influencing career decisions of students. Although influence of parents may be strong among children from middle class backgrounds, few of the students' parents in Oriente (because of their marginal position in the society) are acquainted with the range of occupational opportunities available to university graduates, aside from the more commonly known professions of medicine, law, and engineering.

Peers are mentioned more frequently than parents, but usually as a secondary influence. Friends play an important role in career decisions at two points: 1) between the time students graduate from high school and before they enter the university, and 2) during "Cursos Básicos." Advanced students informally counsel entering students on what different programs are open to them and what difficulties they are likely to encounter.

Although not readily admitted, academic problems are also a principal determinant of student decisions. Ten per cent of the students (excluding freshmen) describe difficulties in a particular course as decisively influencing their choice of a specialization. Given the large number of students transferring out of rigorous medical and engineering programs, this factor would appear to be more important than indicated by the ten per cent above.

TABLE II-12

The Three Most Important Factors Influencing Students' Choice of a Field of Specialization

Factor	%
Aptitudes or Preference for a Particular Subject	86.0
Prestige of Career in Venezuelan Society	42.0
Possibilities of Obtaining a Good Job	41.0
Friends Who Study the Specialty	18.0
Parents	13.0
People Practicing the Profession	12.0
High School Teachers	11.0
(Number of Cases)	(887)[a]

[a] Since more than one choice was permitted, percentages do not total to 100 per cent.

Once a student has changed his major, he has an investment in his new field. Changing professional schools is not an easy task since there is almost no overlap of courses beyond the introductory cycle. Twenty per cent of our subjects would not enroll in the same specialty (were they able to start over), but only nine per cent -- mostly freshmen -- are seriously contemplating a change.

Generally, students are highly committed to completing their studies. Even though impatient to begin practicing a profession and earn sufficient money to support themselves and their families, only 13 per cent would abandon their studies for a good paying job (Bs. 2,000 monthly). They recognize that in the long run, a degree confirms middle class status and that five years after graduation they could be earning salaries close to Bs. 3,000.

Realistically, many also recognize that when they graduate from the University they will have little more than a general professional preparation. As technical and professional roles become increasingly specialized in Venezuela, they will need further education and expertise in specific areas of their discipline.

The percentage of students who are thinking about graduate studies is surprisingly high -- 56 per cent.[20] Forty-two per cent are uncertain, while only three per cent are opposed to further studies.

In the past, few university graduates seriously thought about advanced studies. These students usually were from elite backgrounds; and their economic survival as well as self-identity were not intimately related to the successful practice of a profession. The demands of a technological society had not yet been generated, and competition was minimal.

Although students are quite critical of foreign penetration of their economy, they are willing to learn the technology of the more developed countries through firsthand contact. The majority of students who would like to do advanced graduate work mention either the United States or Western European countries as their first choice -- the number of graduate schools in Venezuela being limited mostly to those of the Universidad Central.

Studying and working abroad are two different things for these students. A smaller number (29 per cent) would accept employment outside Venezuela. About the same percentage (30 per cent) are opposed to working

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[20] This percentage most likely is high compared with other universities in Venezuela, and may reflect the efforts of Oriente to establish postgraduate programs, particularly in science fields, in the near future.

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elsewhere. The largest group (41 per cent) are undecided, many waiting to see what the economic and political situation in the country will be.

When asked to respond to an open-ended phrase -- "The future of Venezuela will be ..." -- one-fourth of the students were optimistic. Eighteen per cent were uncertain; another 24 per cent mentioned that the future depended on economic, political or social changes in the country; and the largest single group (33 per cent) were pessimistic.

Professional Efficacy

Given the upward mobility and high expectations of these students, plus their realistic assessment of chances for academic and occupational success, what evaluations do they have of their competency to perform occupational roles?

Students' belief in their efficacy as future professionals is one of the key variables we selected for analysis. We considered this sense of competency to be an essential part of students' identification with and commitment to occupational roles as well as an important factor in their overall integration into Venezuelan society.

Our principal measure of professional efficacy is a five item Likert-type scale developed at the University of Oriente, and designed to tap essentially the same dimensions as the "Political Efficacy Scale" described in the introductory chapter.[21] The "Professional Efficacy Scale" consists of the following elements: 1) the potency of the individual -- that in spite of competition, he will get a good job; 2) the responsiveness of significant others, such as employers, to the individual -- his qualifications are more important than influence in finding employment; 3) the comprehensibility and existence of structured paths open to the individual -- the student has a clear idea of his career line and his profession is well defined in the society; 4) a general resistance to fatalism -- specifically, the role of luck in getting a job, but also implied by the other items on influence and competition barring the student from obtaining work.

For the most part, students tend to be ambiguous about their future role in the industrial economy of Venezuela -- 48 per cent fall at an intermediate position on the scale.[22] Almost one-third of the students (30 per cent) have low evaluations of their competency, ranking at the alienated end of the scale; while only 22 per cent attain a high position on professional efficacy.

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[21] For further details on the construction of the "Professional Efficacy Scale," see Appendix I.

The principal item accounting for low scores on the "Professional Efficacy Scale" concerns the definition of careers in the society. Over two-thirds of the students (68 per cent) believe that most people don't know what type of work their profession involves. Slightly over half (58 per cent) believe influence and luck play an important -- if not overriding -- role in getting a job. And 51 per cent do have a clear idea of their future work. On the positive side, nearly two-thirds (64 per cent) are not concerned with competition preventing them from finding employment.

Background factors are associated with scores on the "Professional Efficacy Scale." Not surprising are the findings that males rank in the high group (24 per cent) more often than do females (17 per cent); and that students from middle-to-upper class backgrounds are more efficacious (28 per cent) than those from the lower two strata (20 per cent).

Initial differences between sexes and social classes, however, diminish as students become more integrated into the University and their individual departments. Coeds who complete the Basic Studies Program are not only superior students but more professionally committed. In Table II-14, we observe that by the second cycle of study there is a decrease in the percentage of coeds placing in the alienated category, while among males there is a five per cent increase. Social class differences largely disappear, when we control for academic field.

Contrary to our expectation that a student's sense of professional efficacy would increase with advanced standing in the University, this does not prove to be the case. Table II-15 shows that levels of professional efficacy remain essentially the same between the two cycles of

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[22] Cutting points were determined using an absolute criterion. Scores on each of the Likert-type items ranged between 1 and 4 points -- an efficacious answer being consistently scored 3 or 4 points and a non-efficacious response receiving 1 or 2 points. We decided that a mean score of 3 or 4 points on the 5 items constituting the scale would place an individual in the high efficacy group; a mean score of 1 or 2, in the low efficacy or alienated group; and a mean between 2.1 and 2.9, in the intermediate group. Subjects were permitted a no response to one item, which was not averaged with the other items. Subjects who did not answer a majority of items were excluded from the analysis -- only 17 students did not complete the scale. This same system of determining cutting points was used with the other Likert-type scales.

TABLE II-13

Scores on the Professional Efficacy Scale by Sex

Professional Efficacy	% Male	% Female
Low	28.0	34.5
Intermediate	47.9	48.8
High	24.1	16.7
TOTAL	100%	100%
(Number of Cases)	(618)	(252)

TABLE II-14

Scores on the Professional Efficacy Scale by Sex and Cycles of Study

	1st Cycle		2nd Cycle	
Professional Efficacy	Male	Female	Male	Female
Low	24.9	39.5	30.1	29.7
Intermediate	50.2	45.2	46.3	52.3
High	24.9	15.3	23.6	18.0
TOTAL	100%	100%	100%	100%
(Number of Cases)	(249)	(369)	(124)	(128)

TABLE II-15

Scores on the Professional Efficacy Scale by Cycles of Study

Professional Efficacy	% 1st Cycle	% 2nd Cycle
Low	29.8	30.0
Intermediate	48.5	47.9
High	21.7	22.1
TOTAL	100%	100%
(Number of Cases)	(373)	(497)

study. Whatever impact the University has on a student's sense of professional efficacy must be viewed within the context of academic departments, as a function of such important variables as prestige, interaction with significant others, and reward systems.

In subsequent chapters, we will discuss the ways in which different academic environments influence student feelings of professional efficacy. As a background to this discussion, we present in Table II-16 the percentage distribution of students scoring high on professional efficacy according to field of study. Generally, students in engineering, medicine, and exact sciences (mathematics and physics) tend to rank high on professional efficacy; students in chemistry, biology, animal husbandry, agricultural engineering, administration, and sociology tend to rank low on this variable.

Political Efficacy

By contrast with professional efficacy, increasing integration into the University milieu is associated with a diffuse sense of competence as a political actor, regardless of department of study (Table II-17). Similarly, as the student progresses through the University he is more likely to express adherence to achievement values of activism, independence from relatives, and trust of others (see Kahl scales, Tables II-18 through II-20).

Students' belief in their efficacy as political actors is one of the principal areas we selected for analysis. Feelings of efficacy appear to be a necessary underpinning for student participation in the political realm and a sustaining force in their efforts to reform antiquated and unjust social structures.

Our principal measure of political efficacy is a modified version of the Likert-type "Political Efficacy Scale," developed by Campbell, Gurin, and Miller (1954). To repeat the researchers' definition: it is "the feeling that individual political action does have, or can have, an impact upon the political process, i.e., that it is worthwhile to perform one's civic duties. It is the feeling that political and social change is possible, and that the individual citizen can play a part in bringing about this change" (p. 187).[23]

Students at Oriente -- and in universities through Latin America -- tend to have positive evaluations of themselves as political actors.

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[23] For details on validating the "Political Efficacy Scale" at the University of Oriente, see Appendix I.

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TABLE II-16

Percentage Scoring High on Professional Efficacy according to Field of Study

Field of Study	% High on Efficacy	Number of Cases
Geological, Mining, and Petroleum Engineering	35.7	42
Medicine	27.7	137
Chemical, Electrical, and Mechanical Engineering	27.0	211
Mathematics and Physics	24.4	78
Chemistry	18.9	37
Animal Husbandry	18.8	69
Agricultural Engineering	17.0	53
Biology	16.5	85
Administration	12.3	73
Sociology	11.8	85

TABLE II-17

Scores on the Political Efficacy Scale by Cycles of Study

Political Efficacy	% 1st Cycle	% 2nd Cycle
Low	21.4	13.2
Intermediate	48.4	48.5
High	30.2	38.2
TOTAL	100%	100%
(Number of Cases)	(374)	(499)

TABLE II-18

Scores on the Activism Scale (Kahl) by Cycles of Study

Activism	% 1st Cycle	% 2nd Cycle
Low	23.7	14.5
Intermediate	35.5	34.3
High	40.9	51.2
TOTAL	100%	100%
(Number of Cases)	(372)	(496)

TABLE II-19

Scores on the Integration with Relatives Scale (Kahl) by Cycles of Study

Independence	% 1st Cycle	% 2nd Cycle
Low	30.5	18.9
Intermediate	31.0	29.7
High	38.5	51.4
TOTAL	100%	100%
(Number of Cases)	(371)	(498)

TABLE II-20

Scores on the Trust Scale (Kahl) by Cycles of Study

Trust	% 1st Cycle	% 2nd Cycle
Low	62.0	50.3
Intermediate	30.2	36.4
High	7.9	13.3
TOTAL	100%	100%
(Number of Cases)	(368)	(497)

They are cognizant of the role their predecessors have played in the past in opposing corrupt regimes and toppling dictators, and they are aware of the disruptive influence they can still wreak in national politics.

Student politics from the secondary education level up is a reflection of the national political scene. Student parties, with few exceptions, are youth movements of national political parties and prominence as a student leader is often a prelude to a career in national politics.[24]

No less important a consideration is that one can vote at eighteen years of age in Venezuela (97 per cent of our sample is of voting age). 1968 was a critical year in the political history of the country: national elections were being held in December, and the chances of an opposition group winning were excellent. Extremist groups of the left also believed they had a chance to vote for at least one candidate of their choice in either the break-away faction from the governing Acción Democrática party (MEP -- People's Electoral Movement) or in a front organization for the Communist Party (UPA -- Union for Advancement).

These factors are reflected in the percentage distribution of scores on the "Political Efficacy Scale." Although the largest group again falls at an intermediate position on the scale (49 per cent), only 16 per cent rank low on efficacy. Over one-third (35 per cent) express a strong subjective sense of political competence.

On the individual items forming the scale, over three-fourths (80 per cent) believe in the efficacy of voting and the importance of their political opinions (79 per cent). Students are about equally divided on the dimension of comprehension of political events -- 52 per cent evaluating positively their understanding of the political arena. Forty-one per cent believe they can influence the political process through their activities (aside from voting). On the other hand, students are extremely cynical about the responsiveness of politicians to public opinion -- more than two-thirds (65 per cent) do not believe that politicians are interested in what people like themselves have to say about the conduct of government.

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[24] The two presidents of Venezuela from 1959 to 1969, Rómulo Betancourt and Raúl Leoni, were student leaders of the so-called "Generation of 1928," which launched the first organized opposition to the military caudillo Juan Vicénte Gómez. The Rector of the University of Oriente was a student leader in the second major student movement, the group of 1936, which agitated for reform, following the death of Gómez in December of 1935.

TABLE II-21

Age Distribution of Students

Age	%
Less than 18	3.4
18 - 19	19.1
20 - 21	32.9
22 - 23	23.6
24 - 25	12.7
26 - 30	6.7
30 plus	1.6
TOTAL	100%
(Number of Cases)	(884)

As we will note in greater detail in Chapter V, civic norms are still imperfectly crystallized. In their impatience for change and distrust of the older generation of politicians, over half the students agree with statements condoning the use of disobedience and violence.

The University of Oriente, despite its objectives of inculcating civic norms, has not made a discernible impact in this area. Requiring one course in sociology and offering an elective in community development are not bound to have a noticeable effect on many students' political orientations.

The University has exerted a greater influence in curbing sectarian politics by denying students a permanent voice in the governance of the institution (as is the case in the national autonomous universities), and establishing the regulation that students will be subject to expulsion for engaging in partisan political activities disruptive of academic affairs. Until a student strike in the spring of 1968, student representatives could express their opinions before the University governing councils only when specific issues arose. The student centers at the University, although governed by student groups that won elections on the basis of their affiliation with national political parties, serve primarily as vehicles for voicing student grievances intermittently and as organizations providing a number of social services on a year-round basis.

SUMMARY

The University of Oriente is an interesting case of a modernizing institution transplanted to a backward region of a developing country. Despite the structural uniqueness of the University, a fundamental point would be missed if we did not stress the underlying persistence of attitudes that are basically akin to those of students in more traditional universities. Whether the setting is the more remote eastern region or the hub of the country, Caracas, students are concerned with structural changes in their immediate academic environments and within the larger society. They tend to believe in their efficacy as political actors; and when aroused, they will resort to direct action.

Whatever their social class backgrounds may be, their self-identity is greatly determined by the occupational roles they aspire to perform. These roles, as has been suggested, are not clearly defined in a transitional society such as Venezuela; and the future expansion of the economy is also a cause of uncertainty. They experience further frustrations in recognizing that ascriptive forces play an important role in obtaining a desirable job -- and because of their lower socioeconomic status and opposition to the ruling government party, they are likely to be disadvantaged in the game of influence.

At the same time, a considerable number are optimistic about the future. Despite many obstacles, students at the University of Oriente remain committed to becoming competent professionals who will make a contribution to the development of their country.

CHAPTER III

THE IMPACT OF A UNIVERSITY SOCIAL STRUCTURE ON PROFESSIONAL EFFICACY

In this chapter we will analyze the impact of a university social structure on students' sense of professional efficacy. Do high rates of student-teacher interaction, positive reinforcements, and work experiences in the university affect the students' images of themselves as future professionals? What importance does occupational prestige have in clarifying future professional roles for the individual? How do the different independent variables -- internal reward systems and career prestige -- work together to influence student scores on the dependent variable?

The following analysis will demonstrate that different structural features of the University of Oriente are predictive of students' feelings of efficacy in the professional area. It will be argued that although correlations are not very high, a stable pattern of relations emerges: students who interact with significant and rewarding teachers, engage in professionally relevant tasks, and identify with prestigious careers tend to express a stronger sense of professional efficacy.

INTERACTION WITH SIGNIFICANT AND REWARDING OTHERS

In the Introduction, we hypothesized that when students have ample opportunities to interact with prestigious and rewarding role models in their specializations, students' subjective sense of professional efficacy would tend to be high.[1] We subsequently distinguished three aspects of the interaction process for analysis: 1) frequency of student-teacher interaction, 2) significance or prestige of professors with whom the students interact, and 3) quality or "warmth" of student-teacher relations. In order to study internal reward systems, we selected as our focus, teacher evaluations of students.

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[1] In our discussion the following terms will be used interchangeably: low professional efficacy and alienation, high professional efficacy and competency. These terms refer to relative positions on the "Professional Efficacy Scale," a subject's position in large part being a result of the cutting points we discussed in Chapter II.

Frequency of Interaction

As indicators of interaction with teachers in important areas, the students were asked two questions: how frequently they discuss with their professors 1) academic matters and 2) career problems. Overall rates of interaction are relatively high, particularly with regard to students consulting teachers on their class work.

The general impression from these findings is that the University of Oriente -- in comparison with other universities -- has been successful in increasing student-teacher interaction. The traditional Latin American university with its part-time faculty provides few opportunities for close contacts outside the formal classroom schedule. In a study of Brazilian university students, Bonilla (1965) notes that "The apparent excess of professors to pupils ... masks with few exceptions a system of irregular, haphazard, routinized instruction with few contacts between students and the teaching staff outside of those situations in which the fulfillment of some bureaucratic transaction requires such an encounter" (p. 204). Similar observations on the existence of autonomous student subcultures, largely divorced from faculty influences, are reported by Scott (1965), Bakke (1964), and Waggoner (1966).

Even where structured opportunities do exist, there is a tradition among Latin students, as in many other parts of the world, that students should not be too close to teachers.[2] Secondly, the great social distance existing between elites and non-elites in highly stratified societies -- typical of many Latin American countries -- is to a certain extent characteristic of relations between students (incipient elites) and teachers (established elites). It is not uncommon to hear students express a general lack of trust or confidence in their professors, whom they consider remote and indifferent to their welfare.

These problems exist in the University of Oriente, but on a comparatively minor scale. Institutional arrangements at the University support full-time faculty and students. Also conducive to higher rates of interaction are the newness of the institution with its relative flexibility of structures, the smallness of the student population, and the isolation of certain campuses.

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[2] For an interesting discussion of why students may frown on their colleagues currying favor with professors, see Becker _et al_. (1961). The researchers analyze student-faculty relations in terms of game theory (p. 180).

More than three-fourths of the students reply they discuss academic matters with their professors on a fairly regular basis (see Table III-1). Within this group, 62 per cent occasionally discuss class related topics with teachers, while another 15 per cent specify frequent conversations.

Beyond the immediate concern of class work, fewer students find a basis for interacting with teachers. In Table III-2, as many as 42 per cent answer they seldom discuss career related problems with faculty. A combined total of 58 per cent occasionally or frequently ask their professors for some advice on future work.

Venezuelan students are not accustomed to seeking vocational information from their teachers, and professors have not viewed themselves as being responsible for counselling students in this area. Although the University of Oriente is attempting to break this pattern and actively guide students toward market positions essential to the development of the eastern region, several major problems exist. Outside a limited range of experiences, few professors are likely to possess extensive information on available job opportunities. The isolation of the University in the eastern region compounds the problems of acquiring vocational information in a transitional society, characterized by a rapid proliferation of jobs and the absence of mechanisms to articulate market demands.

Structurally, the University has established a cycle of basic studies in Cumaná, where students spend one or two years before entering their specialty which may be located on another campus.[3] For many students, this cycle of introductory studies does not provide adequate opportunities to consult teachers acquainted with important features of their future occupations.

Whatever restraints may exist on closer contact, our data show that the student who does not interact with his teachers is more likely to manifest a lower sense of professional efficacy. In Table III-1, 39 per cent of the subjects who seldom or never discuss academic problems with faculty rank near the alienated end of the scale, as against 27 per cent of the students reporting frequent interaction. Again in Table III-2, students who rarely discuss career problems tend to be found among those ranking low on efficacy -- 35 percent of the low interaction group, compared with 26 per cent of the high interaction group.

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[3] In 1968, the medical, engineering, and animal husbandry schools were located on campuses without a basic studies program ("Cursos Básicos").

TABLE III-1

Percentage Distribution of Scores on Professional Efficacy Scale by Frequency with which Students Discuss Academic Topics with Teachers

		Frequency of Discussion		
		Seldom or Never	Sometimes	Frequently
Position on Professional Efficacy Scale	High	18%	23%	22%
	Intermediate	43%	49%	52%
	Low	39%	27%	27%
		$X^2 = 10.67$	df = 4	$p < .05$
		100%	100%	100%[a]
(Number of Cases)		(200)	(539)	(130)
Column Per Cent of Total Sample		23%	62%	15%

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[a] In this and succeeding tables percentages are rounded to the nearest whole number. Column percentages therefore total to within one point of 100 per cent.

TABLE III-2

Percentage Distribution of Scores on Professional Efficacy Scale by Frequency with which Students Discuss Career Problems with Teachers

		Frequency of Discussion		
		Seldom or Never	Sometimes	Frequently
Position on Professional Efficacy Scale	High	19%	24%	26%
	Intermediate	46%	50%	49%
	Low	35%	27%	26%
		$X^2 = 9.47$	df = 4	$p = .05$
		100%	100%	100%
(Number of Cases)		(362)	(392)	(105)
Column Per Cent of Total Sample		42%	46%	12%

Interaction with Significant Others

The second dimension of the interaction process centers on the prestige or significance of teachers as role models. Although students have difficulty in comparing the prestige of their professors with those of other departments, they uniformly agree on the importance of certain criteria for evaluating the prestige of professors within their academic field.[4]

In all departments, they assign primary importance to professors' knowledge and pedagogy. At a lower level of importance, students expect their teachers to make course work relevant, to be responsive to their problems as well as fair in grading them. Research, not a common activity of Latin American university professors, is given little weight. However, a proportionately greater number of biology, chemistry, and animal husbandry students are interested in research careers and, therefore, rate this aspect higher than do others. Despite student protestations of faculty indifference to major political and social issues, few specifically select this as an important criteria.

As indicators of faculty status, students were asked 1) how satisfied they are with their teachers' knowledge of subject matter, and 2) what percentage display good teaching skills. Subjects generally express the opinion that although their teachers know the material, they are poor lecturers. This opinion, recorded in exploratory interviews with some thirty advanced students, was confirmed by later responses to the questionnaire. In Table III-3, 78 per cent of the students feel satisfied with their teachers' knowledge. However, in Table III-4, only 21 per

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[4] Item: "What criteria do the students in your department use to evaluate the prestige of teachers?" "Indicate the three most important criteria:"

Criteria	Frequency Criteria Mentioned	% of N(887)*
a) Knowledge of subject matter	780	89%
b) Ability in presentation of subject matter	725	82%
c) Application of theory to practice	339	38%
d) Interest in student problems	232	26%
e) Fairness in assigning grades	231	26%
f) Interest in conducting research	191	22%
g) Accessibility to student consultations	160	19%
h) Interest in national-international problems	35	0%

*Since more than one response was permitted, percentages do not total to 100 per cent.

TABLE III-3

Percentage Distribution of Scores on Professional Efficacy Scale by Student Satisfaction with Teacher Knowledge

		Dissatisfied	Satisfied
Position on Professional Efficacy Scale	High	18%	23%
	Intermediate	42%	50%
	Low	40%	27%
		$X^2 = 11.81$ df = 2	$p < .01$
		100%	100%
(Number of Cases)		(187)	(648)
Column Per Cent of Total Sample		22%	78%

TABLE III-4

Percentage Distribution of Scores on Professional Efficacy Scale by Student Evaluations of Percentage of Professors with Good Teaching Ability

		Few or None	More or Less Fifty Per Cent	The Majority
Position on Professional Efficacy Scale	High	19%	25%	24%
	Intermediate	46%	49%	53%
	Low	35%	27%	24%
		$X^2 = 9.81$	df = 4	$p < .05$
		100%	100%	100%
(Number of Cases)		(372)	(300)	(177)
Column Per Cent of Total Sample		44%	35%	21%

cent rate the majority of their professors positively on teaching ability, with 44 per cent negatively evaluating most instructors on this aspect.

Widespread criticism of teachers' pedagogy reflects two major problems. First, there is the relative inexperience of many professors, whose initial teaching experience is at the University itself. Academic departments, such as sociology, consist of young professors recruited immediately after graduation from other national universities. On the other hand, more technical fields -- administration, for example -- have turned to industry and the business sector for experienced staff with no university teaching background. Secondly, the University, in the absence of qualified nationals, has recruited a large number of foreign professors on short-term contracts. Many arrive in Oriente not speaking Spanish and within a month are lecturing to students, who have great difficulty in understanding them. The percentage of foreign professors is especially high in scientific fields and certain branches of engineering. In the mathematics and physics departments the majority are non-Venezuelans.

The evidence suggests that students who are less satisfied with their teachers' competence tend to be less efficacious. Table III-3 shows 40 per cent who are dissatisfied with their teachers' knowledge of the material score low on efficacy, compared with 27 per cent who are not dissatisfied. Similarly, in Table III-4, 35 per cent of the subjects critical of their professors' teaching ability rank low on the scale, contrasted with the 24 per cent who positively evaluate the majority of the faculty.

Although it is possible for the causal argument to go in the opposite direction -- that is, a student who is already alienated will tend to evaluate his teachers negatively -- we do not believe this to be the case. We assume that students do not enter the university alienated. These students represent an elite which has successfully achieved a university level education. We argue, instead, that alienation from future occupational roles is largely a result of negative training experiences within the university. Interacting with less than competent teachers constitutes one of several negative experiences which may have a deleterious effect on students' feelings of efficacy.

Teacher Warmth

Although students often seek out prestigious role models to counsel them, our data indicate that perhaps the essential element facilitating contact is the students' perception of teachers' friendliness and responsiveness to their interests. A professor, no matter how competent, will be generally avoided outside the classroom if he is considered arrogant or arbitrary in his treatment of students.[5]

The importance of a supportive faculty environment in directing students toward scientific and scholarly careers is corroborated by studies conducted on university populations in the United States (see Thislethwaite, 1960; Brown, 1962; Knapp and Goodrich, 1952; Knapp and Greenbaum, 1953). At the same time the indifference of professors and distant student-teacher relations may have a detrimental impact on students' self-esteem and aspirations to continue in academic fields (see Davis, 1966).

Two questionnaire items were selected as indicators of the quality and warmth of student-professor relations. The students were asked to describe 1) their relations with faculty on a scale ranging from very cordial to hostile, and 2) the degree of satisfaction with their teachers' friendship.

Student relations with faculty members would appear to be amicable for the most part. However, a small but significant group indicate either dissatisfaction or antagonism. In Table III-5, 44 per cent state their relations with professors are very cordial or cordial; an almost equal number consider their relations normal but not especially friendly (in Spanish, "regular"); and 16 per cent view their contact with professors in negative terms. On the second item (Table III-6), three-fourths of the students feel satisfied with their professors' friendship.[6]

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[5] Open-ended item: Students give reasons for believing why they do not have sufficient opportunities to converse with professors about studies and career interests.

Coding Categories	Frequency
a) Lack of professors' interest	123
b) Lack of time -- on part of student	85
c) Lack of time -- on part of professor	66
d) Lack of student interest or necessity	57
e) Lack of structured opportunities	29
f) Other -- Lack of trust or relevant role models	39

[6] "Friendship" is the closest English equivalent to "amistad," the word used in the Spanish version of the questionnaire. Because of the informality of interpersonal relations in eastern Venezuela, the word "friendship" makes sense even when used to refer to a personal relationship between students and teachers which cuts across authority lines. Still, a number of students (85) had difficulty in answering the item.

TABLE III-5

Percentage Distribution of Scores on Professional Efficacy Scale by Student Relations with Professors

		Relations		
		Reserved or Distant-Hostile	Normal	Cordial or Very Cordial
	High	18%	21%	25%
Position on Professional Efficacy Scale	Intermediate	40%	49%	50%
	Low	42%	30%	25%
		$X^2 = 13.90$	df = 4	$p < .01$
		100%	100%	100%
(Number of Cases)		(141)	(346)	(375)
Column Per Cent of Total Sample		16%	40%	44%

TABLE III-6

Percentage Distribution of Scores on Professional Efficacy Scale by Student Satisfaction with Teacher Friendship

		Dissatisfied	Satisfied
Position on Professional Efficacy Scale	High	20%	22%
	Intermediate	43%	51%
	Low	37%	27%
		$X^2 = 8.03$ df = 2	$p < .05$
		100%	100%
(Number of Cases)		(198)	(604)
Column Per Cent of Total Sample		25%	75%

Missing Observations = 85

In general, the less cordial and friendly a student's relations with professors, the more likely he will be alienated from occupational roles. Data in Table III-5 highlight the argument that poor student-faculty relationships tend to be associated with student alienation. Forty-two per cent of the group reporting reserved or hostile relationships score low on professional efficacy -- seventeen percentage points more than the 25 per cent who maintain cordial relations. This pattern persists in Table III-6, where dissatisfaction with teachers' friendliness correlates with lower levels of efficacy. Thirty-seven per cent of those dissatisfied rank low on the scale, compared with 27 per cent of the satisfied students.

We observe in Table III-6 that student satisfaction with teachers' friendship has less influence on the high efficacy group. The efficacious student maintains cordial relations with instructors but apparently has less need for friendship.

Teacher Evaluations of Students

College instructors may be variously viewed as role models, mentors, and confidants -- and also as powerful judges. Through routine evaluations and more particularly in the grades he assigns, the professor is a dispenser of important gratifications or deprivations. McKeachie, Pollie, and Speisman (1955), for example, note that "The power of the instructor to assign a grade means that the instructor can, by assigning a low grade, bar the student from attaining some of his most important goals, such as admission to graduate professional training, the prestige of college graduation ..., and the material advantages of good grades in securing a job" (p. 97). Similarly, in a study of relative deprivation among students in a high prestige United States college, Davis (1966) observes that "feeling of success" is a crucial ingredient in self-evaluations and, consequently, career decisions; he suggests that colleges may do well to consider ways of improving the feedback of "success information" through their current grading systems (p. 31).

As indicators of satisfaction with teacher-student evaluations, subjects were asked two questions: how satisfied they were with 1) their grades in general, and 2) teachers' fairness in assigning grades. In Tables III-7 and III-8, students manifest relatively high levels of satisfaction with teacher evaluations. Fifty-seven per cent are satisfied with their grades, while 60 per cent believe their grades are fairly determined. A small percentage of students (eight per cent) are uncertain as to their feelings, being satisfied in some respects and dissatisfied in others (or not having been in the University long enough to form an opinion). Thirty-five per cent are definitely dissatisfied with their grades and 40 per cent believe teachers to be unjust in their evaluations. For a significant number the internal reward system of the University is not properly functioning as a source of incentives or gratifications.

TABLE III-7

Percentage Distribution of Scores on Professional Efficacy Scale by Student Satisfaction with Grades

		Dissatisfied	Satisfied
Position on Professional Efficacy Scale	High	20%	25%
	Intermediate	46%	48%
	Low	34%	27%
		$X^2 = 5.30$ df = 2	$p > .05$
		100%	100%
(Number of Cases)		(304)	(498)

"Don't Know" Responses = 69

TABLE III-8

Percentage Distribution of Scores on Professional Efficacy Scale by Student Satisfaction with Teacher Fairness in Assigning Grades

		Dissatisfied	Satisfied
Position on Professional Efficacy Scale	High	16%	25%
	Intermediate	48%	49%
	Low	36%	26%
		$X^2 = 14.06$ df = 2	$p < .01$
		100%	100%
(Number of Cases)		(325)	(493)
Column Per Cent of Total Sample		40%	60%

69

These negative findings indicate that the University of Oriente has not been completely successful in adopting an effective evaluation system. In the traditional Venezuelan university system, final examinations are all-important. At the University of Oriente, a student's final grade reflects his performance throughout the academic semester. Two partial examinations account for 50 per cent of the grade, with class assignments representing another 20 per cent. The final examination is valued at 30 per cent of the grade given. A student with a good prior record, therefore, enters his final examination with an excellent probability of passing his course. The main obstacle is in getting to the final. A student must obtain an overall grade average of five (on a scale of ten) on his previous semester tests and classwork to be permitted to take the examination.

What was established as a minimal requirement has evolved into a rigid barrier for many students. It is not uncommon for a majority of students to be thus prevented from taking the final examination -- this is particularly true of introductory mathematics and physics -- because of appallingly low averages. Undoubtedly, much of the problem is traceable to the poor preparation of entering students and inefficient study habits. Still, many professors undeniably abuse or misinterpret the evaluation system, being excessively strict so as to weed out less competent students early in their academic career. The heavy academic load of six or seven major subjects and electives, plus the continual barrage of examinations and quizzes, places an excessive burden on even the best of students.

Dissatisfaction with grades, however, does not necessarily lead to alienation. Percentage differences between dissatisfied and satisfied students reflect the predicted direction -- in Table III-7, 34 per cent of the discontented rank low on the professional efficacy scale as against 27 per cent of those who are content with grades -- but the tendencies are not statistically significant (chi square, $p > .05$).

More important, still, would appear to be the cause of dissatisfaction -- whether students are disappointed with their own performance or specific aspects of the evaluation system. Our item on fairness in assigning grades proves to be more significantly associated with efficacy (chi square, $p < .01$). In Table III-8, 36 per cent of the discontented rank low on efficacy, compared with 26 per cent who view their grades as justly given.

Overall Trend

In summarizing our findings to this point, our data tend to support the initial hypothesis that interaction with prestigious and rewarding teachers would be substantially associated with low student alienation.

Although the percentage differences are not especially striking on any item, the trend is consistent and invariably in the predicted direction. We observe that on the four dimensions selected for analysis -- 1) frequency of discussion, 2) prestige of instructors, 3) warmth of student-professor relationships, and 4) teacher evaluations of students -- successful and satisfactory experiences are associated with higher levels of professional efficacy.

In the preceding discussion, we referred to the effect of our independent variables on the low efficacy students, since differences were most discernible among this group. The pattern repeatedly revealed that dissatisfaction with grades and poor student-teacher relationships had the negative impact of lowering student feelings of efficacy.

A strong sense of professional efficacy, however, depends on more than satisfaction with grades and teachers. Other aspects of the training process and the academic environment of a school appear to be necessary to the development of positive evaluations of one's competency to perform future occupational roles. In turning to an examination of our other independent variables, we shall note, for example, that the greatest impact of engaging in professionally relevant tasks and being enrolled in a prestigious department is on the high efficacy group.

WORK EXPERIENCES AND PROFESSIONALLY RELEVANT TASKS

Student interaction with prestigious and rewarding teachers constitutes but one set of important independent variables influencing student self-evaluations of their competency to perform future occupational roles. Our second major hypothesis was that when students have ample opportunities to identify with occupational roles through participation in professionally relevant tasks, alienation would tend to be low (see Introduction). The University, through its curricular activities and system of scholarships and assistantships, can structure a broad variety of opportunities for students to acquaint themselves with important features of their future work.

Relevant Work Experiences

About one-fifth of the students in our sample presently engage in some form of remunerated work. Of these students, approximately 70 per cent are employed by the University. Many of the University-based jobs consist of partial work-study scholarships, involving some twelve hours of work weekly and frequently offering valuable training experiences. To describe several examples, science students serve as laboratory assistants, sociology majors participate in surveys conducted within the University or the city of Cumaná, and animal husbandry students care for livestock and experimental plots of land. The University also employs a small number of advanced students, usually education school graduates studying for a second degree, as classroom and laboratory instructors in the science departments. At the same time many of the work experiences within the University involve routine clerical jobs in the different school libraries or administrative offices of the institution.

Of the remaining 30 per cent employed outside the University, a number of students describe relevant job experiences. Advanced students occasionally gain part-time employment as teachers in neighboring secondary schools; others tutor high school students privately. Still, many jobs are primarily sought for their remuneration and not the learning experiences involved.

Valuable training experiences are also gained during vacation periods. "Pasantía" is the name given to a formal work experience with a company, research institute or governmental agency during the vacation periods of a student's last two years of college. The "pasantía" frequently serve as internship experiences, acquainting students with diverse features of an industry as well as serving as a screening device for employing future graduates of the University. A number of students, particularly in engineering fields, eventually go to work for the companies where they had their "pasantía."

The value of work experiences in the formation of a professional self-image would appear to depend more on the relevance of work than on the fact that a job is located in the University. An initial attempt to divide students according to job location and correlate this item with professional efficacy did not prove significant.

We, therefore, selected a more specific question as an indicator of the independent variable of job and apprenticeship experiences. Students were asked if they had engaged in any work experiences (aside from their academic studies) which they considered to be related to their career interests. In Table III-9, we note that 19 per cent of the students at one time or another have participated in some form of professionally relevant work. The positive influence of firsthand contact with future professional roles is discernible. Thirty-one per cent of the students who report having participated in professionally relevant work rank high on efficacy, by contrast with the 20 per cent reporting no such experience.

The preceding finding lends further support for the predictive power of our independent variables. In this case, the logic of the argument appears to favor work experiences being prior to the development of a sense of professional efficacy. It is less plausible to argue that a sense of efficacy leads the individual to find relevant work. In other correlations, the time order of variables is less obvious.

TABLE III-9

Percentage Distribution of Scores on Professional Efficacy Scale by Student Participation in Professionally Relevant Work

		Relevant Work Experience		
		No		Yes
Position on Professional Efficacy Scale	High	20%		31%
	Intermediate	49%		46%
	Low	31%		24%
		$X^2 = 8.94$	df = 2	p = .01
		100%		100%
(Number of Cases)		(685)		(160)
Column Per Cent of Total Sample		81%		19%

Professionally Relevant Tasks in the Curriculum

In asking questions about professionally relevant tasks included in the curriculum, we encountered the problem that many students do not have a clear idea of these "tasks" and questionnaire items were too specific. Another problem consisted in using terms that were meaningful for the students but only indirectly related to our specific research focus. One example of this indirect approach to measuring professionally relevant tasks was our question about "trabajos prácticos" (practical work experiences).

"Trabajos Prácticos"

The distribution of hours in the University's course schedules is listed in units of theoretical and practical work experience hours. During the cycle of general studies, practical work hours usually consist of laboratory work in the basic sciences, with occasional library assignments or class reports in other courses. As the student progresses through the University into his specialty, "trabajos prácticos" increasingly become more professionally relevant tasks involving independent research and field work.

When we look at combined results for students from both the basic studies program and the professional schools on the item of "trabajos prácticos" -- how satisfied they are with these practical work experiences -- the findings are not significant. However, when the cycle of studies is held constant, a positive relationship emerges between student evaluations of curricular work experiences and professional efficacy during the stage of advanced studies. In Table III-10, 35 per cent of the students dissatisfied with practical work experiences are low on professional efficacy, compared with 24 per cent of those expressing satisfaction.

A striking shift occurs in rates of student satisfaction with curricular activities between the cycles of basic and professional studies -- students in the professional schools becoming extremely critical of existing University support for experimentation, independent study, field work, and visits to local industry. Responses to a follow-up question soliciting information on reasons for dissatisfaction with "trabajos prácticos" show that science and engineering students are generally preoccupied with laboratory conditions and lack of material support to conduct their work; at the same time social science and administration students express concern over the lack of relevant practical work experiences in the curriculum.

The data suggest that students in the advanced cycle become increasingly more aware of the role relevant work experiences play in professional preparation. These experiences are a crucial part of their

TABLE III-10

Percentage Distribution of Scores on Professional Efficacy Scale by Student Satisfaction with Practical Work Experiences -- Results for 2nd Cycle Students

		Dissatisfied	Satisfied
Position on Professional Efficacy Scale	High	20%	26%
	Intermediate	46%	51%
	Low	35%	24%
		$X^2 = 7.57$ df = 2	$p < .05$
		100%	100%
(Number of Cases)		(257)	(213)
Column Per Cent of Total Sample		55%	45%

academic program. They, therefore, are more prone to be critical of existing deficiencies. Whereas 61 per cent of the first cycle students report satisfaction with their laboratory work and study assignments ("trabajos prácticos"), less than half the advanced students (45 per cent) are so satisfied.

Opportunities to Practice Professionally Relevant Tasks

More specifically, students were asked whether they had a clear idea of the principal tasks they expect to perform as professionals, and if they believe the University provides them with opportunities to learn and practice these tasks (see Table III-11). Twenty-two per cent of the students in our sample, in this instance, do not have a clear idea of the future tasks they expect to perform and do not feel qualified to offer an opinion. Sixteen per cent express the opinion that the University is providing them with adequate opportunities, with another 45 per cent indicating that opportunities are "somewhat" adequate. Seventeen per cent negatively view the existing conditions for acquainting themselves with future occupational roles.

When we look at results for students who evaluate the University curriculum on this item, the findings are notable. In Table III-11, 37 per cent who criticize opportunities to practice professionally relevant tasks score low on efficacy, compared with only 20 per cent who feel that opportunities are more than adequate. We further observe that the smallest percentage of students with no opinion are found among the high scoring group (18 per cent), as against the 32 per cent who are ambiguous as to the nature of their future work.

The relation between uncertainty and efficacy is perhaps best explained by referring to the dimensions of the scale. One of the main elements of professional efficacy is an individual's comprehension of his career line -- the student who has a clear idea of his future occupation and sees the connection between training experiences in the university and specific positions in the economy is likely to be more efficacious.

Although several problems were encountered in circumscribing the independent variables of professionally relevant tasks and work experiences, the cumulative findings tend to support our hypothesis. A profile of the student scoring low on professional efficacy has the following general characteristics with respect to our second hypothesis: 1) he tends to lack relevant work experiences, and 2) he tends to be somewhat uncertain as to the nature of the tasks he will perform as a professional and uncertain or negative concerning what the University is doing to help him learn those tasks.

TABLE III-11

Percentage Distribution of Scores on Professional Efficacy Scale by Student Evaluations of Opportunities to Learn and Practice Professionally Relevant Tasks

		Evaluation of Opportunities			
		No Opinion	Little or Not at All	Somewhat	A Lot
Position on Professional Efficacy Scale	High	18%	21%	22%	31%
	Intermediate	49%	42%	51%	50%
	Low	32%	37%	28%	20%
		X^2 = 23.27	df = 8	p < .01	
		100%	100%	100%	100%
(Number of Cases)		(179)	(132)	(357)	(131)
Column Per Cent of Total Sample		22%	17%	45%	16%

Missing Observations = 88

AN INDEX OF INTERACTION-REWARDS AND PROFESSIONAL TASKS

In order to summarize our results on the effect of the above independent variables on students' sense of professional competency, an overall index was constructed. All of the items in Tables III-1 through III-11 were intercorrelated. Five items were finally selected on the basis of their internal consistency and relevance to different dimensions of the interaction process, reward systems, and professional tasks (see Appendix III-1).

Table III-12 illustrates the positive association between the different independent variables and sense of professional efficacy. The most striking tendency is for unsuccessful and unsatisfactory training experiences to be associated with low professional efficacy. Thirty-nine per cent of the group scoring low on the index rank toward the alienated end of the efficacy scale -- a seventeen percentage point difference over the group high on interaction and rewards.

OCCUPATIONAL PRESTIGE

In the introductory chapter it was suggested that in the absence of prestigious role models and adequate rewards a student still might derive a sense of satisfaction and purpose from identifying with a profession which is greatly respected in the society and whose image is clearly established. The important role occupational prestige can play in clarifying the major dimensions of a student's future work would appear to be particularly true of a transitional society like Venezuela and for students who will enter new and poorly defined technical-scientific careers. Even in a developed country such as the United States, Hodge, Siegel, and Rossi (1964) note that "a stable system of occupational prestige provides a necessary foundation to which individuals may anchor their careers" (p. 302).

In order to test our hypothesis -- when students perceive high prestige attached to their future occupational roles, alienation will tend to be low -- we distinguished two types of prestige: 1) collective evaluations of prestige by departments, and 2) individually perceived prestige of an occupation.

Collective Evaluations of Prestige

We first studied collective evaluations of career prestige, as these ratings should be an accurate reflection of the status and clarity

TABLE III-12

Percentage Distribution of Scores on Professional Efficacy Scale by Position on Index of Interaction-Rewards

		Student Position on Index		
		Low	Intermediate	High
Score on Professional Efficacy Scale	High	17%	19%	28%
	Intermediate	44%	48%	51%
	Low	39%	33%	22%
		$X^2 = 22.35$	df = 4	$p < .001$
		100%	100%	100%
(Number of Cases)		(172)	(356)	(342)
Column Per Cent of Total Sample		20%	41%	39%

of occupations in the larger society as well as the prospects a student faces in seeking employment after graduation. Departments were ranked according to the percentage of students who rated their field of study as having high prestige in Venezuelan society (see Table III-13). Although there is a general tendency for students to overrate the prestige of their specialty, these intradepartmental evaluations correspond to our expectations (see introductory chapter) and correlate highly with an independent study of career prestige among students of "Cursos Básicos" (see Appendix III-2).

There is general student consensus as to the high status of the more traditional professional fields. Medicine ranks highest in prestige, followed by the different engineering specializations; the exact sciences (mathematics and physics), chemistry, and administration occupy the middle rungs of the prestige ladder; biology, animal husbandry, and sociology rank lowest.

As we had predicted, high prestige contexts exert a positive influence on sense of professional efficacy. In Table III-14, we observe that 27 per cent of the students in the most prestigious contexts (medicine and engineering) attain a high position on the efficacy scale, compared with 16 per cent of the students in the low prestige fields of animal husbandry, biology, and sociology.

Individually Perceived Prestige

Not only is enrollment in a prestigious field associated with a high subjective sense of competence, but the individual perception of an occupation having high status in the society exercises a positive effect. The statistical differences in Table III-15 are among the most significant we encounter in analyzing the effects of our independent variables on student alienation from occupational roles. In Table III-15, 61 per cent of the students who rate their career's prestige as low rank in the alienated category -- a thirty-five percentage point difference over students who view their career as having high status in Venezuelan society. We note that the number of students simultaneously rating career prestige low while scoring high on professional efficacy is only three (that is, only two per cent of the high efficacy group reply that their specialization has low status in Venezuelan society).

Seven per cent of the sample respond that they are unable to evaluate the prestige of their field. For the most part, these students are in new specializations such as sociology or animal husbandry. Since the status of these occupations is either undefined or lower than that of

TABLE III-13

Ranking of Departments according to Percentage of Students Rating Prestige of Career High[a]

Rank	Departments	% Rating Prestige High
	High Prestige Contexts	
1	Medicine	78%
2	Chemical, Electrical, Mechanical Engineering	69%
3	Geological, Mining, Petroleum (Natural Resources) Engineering	67%
4	Agricultural Engineering	66%
	Intermediate Prestige Contexts	
5	Chemistry	60%
6.5	Mathematics and Physics	52%
6.5	Administration	52%
	Low Prestige Contexts	
8	Biology	50%
9	Animal Husbandry	48%
10	Sociology	45%

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[a] We emphasize the point that Table III-13 is not a substantive table. It was constructed by first abstracting the percentage of students in each department who rated the prestige of their field as being high; departments were then ranked on these ratings.

TABLE III-14

Percentage Distribution of Scores on Professional Efficacy Scale by Collective Evaluations of Occupational Prestige

		Prestige of Field		
		Low	Intermediate	High
Position on Professional Efficacy Scale	High	16%	19%	27%
	Intermediate	49%	51%	47%
	Low	36%	30%	27%
		$X^2 = 15.15$	df = 4	$p < .01$
		100%	100%	100%
(Number of Cases)		(239)	(188)	(443)
Column Per Cent of Total Sample		28%	22%	51%

TABLE III-15

Percentage Distribution of Scores on Professional Efficacy Scale by Individual Perception of Occupational Prestige

		Perception of Prestige		
		Low	Intermediate	High
Position on Professional Efficacy Scale	High	11%	17%	25%
	Intermediate	28%	52%	49%
	Low	61%	31%	26%
		$X^2 = 30.29$	df = 6	$p < .001$
		100%	100%	100%
(Number of Cases)		(28)	(249)	(527)

Don't Know Responses = 7% (63)

the traditional professions, there is a tendency for the "don't know" group to rank low on professional efficacy.[7]

Cumulative Effect of Individual and Collective Evaluations of Prestige

Are individual and collective evaluations of occupational prestige basically indicators of the same evaluative pattern? Do departmental evaluations have an independent, contextual effect?

We constructed a three-variable table of professional efficacy by individual and collective evaluations of career prestige. Table III-16 shows that both individual and shared evaluations of an occupation's status in the society have an independent effect on a sense of professional competency. Although the percentage differences are not great, they nevertheless are consistent and in the predicted direction.

Table III-16 further shows the cumulative effect of the two independent variables on professional efficacy. The most efficacious group consists of students in prestigious fields who believe they are destined to occupy attractive positions in the society. Twenty-eight per cent of the students in the group high on both dimensions of prestige rank high on professional efficacy. By contrast, the smallest percentage of efficacious students (nine per cent) is found among those individuals in low prestige departments who perceive their field of work to be poorly defined in the society.

CUMULATIVE EFFECT OF PRESTIGE AND INTERACTION-REWARDS

The association we found between departmental prestige and professional efficacy could be accounted for by higher rewards and interaction rates in professional fields such as medicine and engineering. In the introductory chapter, it was conjectured that prestigious and professional fields would further develop a sense of professional competence because they are likely to provide more abundant opportunities to interact with prestigious role models and participate in professionally relevant tasks. To test this hypothesis, the different indicators of rewards and interaction were cross-tabulated by global prestige of departments (see Table III-17A).

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[7] The results for the "don't know" group are eliminated from Table III-15 in order to simplify the presentation of our data.

TABLE III-16

Three-Variable Table of Professional Efficacy by Collective Evaluations and Individually Perceived Prestige of a Field

(% in Each Group Scoring High on Professional Efficacy)

		Global Prestige		
		Low	Intermediate	High
Individual Perception of Prestige	High	20%	22%	28%
		(113)	(100)	(314)[a]
	Intermediate-Low	9%	17%	22%
		(99)	(71)	(107)[a]

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[a] Number of cases on which percentage is based

TABLE III-17A

Percentage of Students Ranking High on Indicators of Independent Variables by Departmental Level of Prestige

Students Reporting	Prestige of Department Low	 Intermediate	 High
Frequent or Occasional Discussions with Professors Re Academic Work	81%	77%	75%
Frequent or Occasional Discussions with Professors Re Career Problems	59%	60%	57%
Satisfied with Teachers' Knowledge	82%	87%	72%
Majority of Professors are Good Teachers	21%	28%	18%
Satisfied with Grades	63%	62%	53%
Satisfied with Teachers' Fairness in Grading	67%	71%	53%
Have Cordial Relations with Professors	52%	45%	38%
Satisfied with Teachers' Friendship	87%	85%	69%
Satisfied with "Trabajos Practicos"	49%	49%	52%
Adequate or Numerous Opportunities to Practice Professionally Relevant Tasks	63%	61%	60%
Total Number of Cases on which Percentages are Based	(245)	(191)	(450)

Unexpectedly, the results diverge from the predicted directions. As departmental prestige increases, overall rates of student-teacher interaction and satisfaction with reward systems decrease. Students in high prestige contexts are particularly dissatisfied with teacher evaluations as well as their personal relationships with the faculty. They also tend to be more critical of their professors' competency.

These results are summarized in Table III-17B, where scores on our overall index of interaction and rewards are cross-tabulated by departmental prestige. The important trend to note is the negative correlation between the variables. Thirty-six per cent of the students in high prestige contexts score high on the index of interaction and rewards, compared with 44 per cent in the low prestige contexts.

We encounter the paradoxical situation of both career prestige and university reward systems being positively correlated with the dependent variable of professional efficacy, while they are negatively associated with each other. In order to further study the combined effect of prestige and interaction-rewards on professional efficacy, a three-variable table was constructed.

Moving diagonally across Table III-18 from the left-hand cell to the upper right-hand cell, we observe the tendency for increasingly higher levels of professional efficacy to be associated with successful training experiences in prestigious fields. Thirty-seven per cent of the students who are in high prestige departments and perceive themselves as interacting with competent and rewarding teachers rank high on efficacy. By contrast, less than one-fifth of the students who are simultaneously enrolled in less prestigious departments and at an intermediate-to-low position on the index (interaction-rewards) score high on professional efficacy.

Table III-18 constitutes the final argument supporting our hypothesis. It illustrates the combined effect of prestige and interaction-rewards while it also establishes them as independent predictors of professional efficacy.

SUMMARY

We have demonstrated in this chapter that interaction with significant and rewarding role models, participation in professionally relevant tasks, and identification with prestigious careers in Venezuelan society are associated with higher levels of professional efficacy. The possibility of studying the cumulative effect of departments forming both high prestige and interaction-rewards contexts is denied by the negative association that exists between these two sets of independent variables. We confront boundary conditions which will be explored in the next chapter.

TABLE III-17B

Percentage Distribution of Scores on Index of Interaction-Rewards by Global Department Prestige

		Global Prestige		
		Low	Intermediate	High
Score on Interaction-Rewards Index	High	44%	44%	36%
	Intermediate	42%	39%	41%
	Low	14%	17%	24%
		$X^2 = 11.39$	df = 4	$p < .05$
		100%	100%	100%
(Number of Cases)		(245)	(191)	(451)

TABLE III-18

Three-Variable Table of Professional Efficacy by Global Prestige and Scores on Interaction-Rewards Index

(% Scoring High on Professional Efficacy)

		Global Prestige		
		Low	Intermediate	High
Score on Index of Interaction-Rewards	High	17%	23%	37%
		(102)	(82)	(104)[a]
	Intermediate	17%	18%	21%
		(102)	(73)	(181)[a]
	Low	9%	9%	22%
		(35)	(33)	(104)[a]

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[a] Number of cases on which percentage is based

CHAPTER IV

BOUNDARY CONDITIONS LIMITING THE IMPACT OF THE UNIVERSITY

In this chapter we will explore important conditions limiting and modifying the capacity of the University of Oriente to socialize students into occupational roles. One set of institutional restraints arises out of departmental decisions governing the recruitment, training, and eventual placement of its students. For example, we will study the consequences of faculty decisions to maintain high, universalistic standards in the admission and promotion of students. Another set of restraints is imposed by the social order which surrounds the University. In this respect, the University of Oriente is limited by the existing occupational market and by its position as a new institution of higher learning in the underdeveloped eastern region of Venezuela. Finally, the impact of a university social structure is conditioned by the attitudes and orientations of students to be socialized. Do student aspirations and institutional goals coincide?

Throughout the following discussion, reference will be made to the concept of a "charter." Meyer (1968) observes that the effectiveness of a socializing agent is dependent on its "charter," that is, the school's relation with and definition in its larger social context (p. 3). "For example a school whose graduates are generally understood to become members of an elite will have much greater impact on the values of its students than a school whose graduates are defined as eligible for only limited technical roles" (p. 4). Interaction between teachers and students, therefore, is conditioned by the understanding both parties have of the wider standing of the institution in society and the status that attaches to its graduates (p. 7).

DEPARTMENTAL LIMITATIONS

In the previous chapter we observed negative correlations between departmental prestige and student scores on our indicators of interaction and rewards. The University of Oriente presents no case of a department that is both prestigious and highly supportive of its students (see Appendix IV-3). On the other hand, no student is so unfortunate as to find himself in an academic environment which, according to our typology, simultaneously ranks low on both prestige and rewards. (For a ranking of departments according to the percentage of students satisfied with different aspects of their environment, see Appendix IV-2.)

The academic environment of high prestige fields, medicine and engineering, is to a great extent determined by the norms and values associated with the exercise of the profession. In the performances they demand of students and in the standards they employ to evaluate them, faculty members appear to be guided by images of their profession in society -- by both its status and its responsibilities. In these fields, students undergo what may be considered an extended initiation rite involving a period of rigorous training and relative deprivation from immediate rewards until admission is vouchsafed into desired and admired statuses (see Becker _et al_., 1961, p. 4).

Academic, scholarly, and technical fields, on the other hand, offer supportive environments, if not a refuge for casualties from the professional disciplines. Through a variety of incentives -- apprenticeship opportunities and easily attainable reinforcements in the form of grades or faculty encouragement -- these departments can attract students to newer, less established careers. The problem, however, is precisely this: because these careers are primarily rooted and sustained in the university, the future success of students in the outside market is problematic. (One characteristic of developing countries such as Venezuela is the lack of clarity and specificity of technical and scientific careers.)

CASE STUDIES OF MEDICINE AND ANIMAL HUSBANDRY

To illustrate the above argument, we decided to study in depth two departments varying on the dimensions of prestige and interaction-rewards as well as future job prospects. Medicine stands out as a case of the most traditional and prestigious field in the University, while animal husbandry represents a recently established specialization. This new field exemplifies the problems of other technical and scientific careers which do not yet possess a "charter." Medicine, a "chartered" school leading to highly visible and elite status in the society, nonetheless presents students with other serious obstacles.

Choice of Career and Overall Commitment

Our profile of medical students at the University of Oriente has many characteristics in common with studies conducted by other researchers (see Rogoff, 1957; and Becker _et al_., 1961). As a rule, the decision to study medicine is made earlier than it is for other disciplines and more often involves family influence in the choice. Similarly, the medical student is likely to have a higher overall commitment to completing his studies and obtaining a professional degree. He views his education almost exclusively in terms of professional preparation.

Over three-fourths of the medical students (78 per cent) reply that they first gave serious thought to pursuing their present career during high school or earlier. In only one other major field had a majority given serious thought to what they would study after graduating from secondary school -- 63 per cent of the students planning to enter chemical, electrical, and mechanical engineering.

Medical students are also unique in the extent to which they have parents serving as explicit role models. Ten per cent of the medical students describe their fathers as working in some area of health sciences. A proportionately higher number of these students, therefore, report parents playing an important role in their career decisions -- ten per cent consider parental influence to have been of primary importance in their choice of a vocation with another 18 per cent assigning this factor secondary importance.

Once a student has determined to pursue a medical career, parental support tends to be very favorable. Eighty-one per cent of the medical students believe their parents support their career choice, with only one student out of 138 reporting familial opposition. By comparison, only 54 per cent of the students in engineering indicate parental approbation.

When we analyze students' commitment to their studies at the University on several other relevant items -- that is, enrolling again in the same specialty, importance assigned to graduating, leaving the University to accept a good job, sacrifices involved for subjects' families -- medical students again score highest. As many as 78 per cent of the medical students are characterized by high overall commitment on an index based on the above items (see Appendix IV-1 for the construction of a commitment index).

By contrast with medicine, the School of Animal Husbandry was opened by the University of Oriente in 1966. The majority of students now enrolled in the specialty (71 per cent) first gave serious thought to this career after they had entered the University and were either enrolled in Basic Studies ("Cursos Básicos") or another professional school. A comparatively large percentage were initially attracted to the field by employment considerations (24 per cent) and the prestige of a new career (34 per cent). An equal number (33 per cent) were propelled toward the field by problems in other specialties.[1]

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[1] Administration shares many of these characteristics with animal husbandry -- being a new, technical career with a large number of transfer students who encountered difficulties in other disciplines.

The choice of animal husbandry meets with more parental opposition than entry into any other specialty in the University. Nine per cent report parental opposition to their career choice. In only one other field, sociology, do more than five per cent of the respondents refer to conflict with parents over vocational decisions.

Despite the inauspicious circumstances associated with entry into animal husbandry, many of the students are highly committed to their new career. Fifty-seven per cent of the advanced students in animal husbandry score high on our index of commitment. Although the percentage of dedicated students is low compared with that of medicine, it is higher than all remaining fields except administration.

The Perils of Prestige: Medicine

Although medicine is the preferred career of the greatest number of freshmen, few students succeed in entering the School of Medicine in Ciudad Bolívar. Approximately 20 per cent of the freshmen registered in the one-year premedical course pass their first hurdle. The rest either leave the University or transfer to another field -- administration, animal husbandry, and biology being the principal recipients. (For example, University files show that of 267 students changing their major in the second semester of 1967, 50 transferred out of medicine, with 18 going to administration, nine to animal husbandry, and seven to biology.

The reasons for this exodus from medicine are understandable when one considers that many students have been attracted to this career from an early age, without necessarily possessing the requisite abilities and aptitudes to succeed in an exceptionally rigorous program. The first year of "Cursos Básicos" is heavily weighted with science and mathematics courses, in addition to social sciences and humanities.[2] Difficulties in "Cursos Básicos" will most likely preclude future success in the School of Medicine. Between the Scylla of mathematics and the Charybdis of physics few medical aspirants survive to reach their destination.

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[2]

First Semester Courses in "Cursos Básicos" in 1968	Second Semester Courses in "Cursos Básicos" in 1968
Biology I	Biology II
Chemistry I	Chemistry II
Mathematics I	Physics I
Spanish I	Mathematics II
English I	English II
Sociology I	Sociology II
Orientation	Socio-Recreational Elective
Socio-Recreational Elective	

If a large percentage of students were to successfully complete the premedical course, they would not thereby gain admittance to the School of Medicine, for that school is firmly committed to a policy of selectively limiting the number of students it can adequately train and teach. The objectives of the school specifically state that it does not plan to compete with other medical schools in the country in the production of doctors. Instead, its major emphasis is on preparing first-rate doctors who will add a qualitative dimension to medicine in Venezuela. The school, with a professional staff of sixty-five and somewhat limited laboratory facilities, has set an entrance quota of eighty.

The first collision between a policy of restrictive admission and student aspirations to enter the School of Medicine occurred recently. More than 150 students passed the premedical course in Cumaná in November of 1968. The School of Medicine decided that only the top eighty students would be permitted to enter the following January, thereby engendering the threat of a general student strike to protest the situation.

One of the principal models the School of Medicine has followed in designing its admission policy and curriculum is the North American medical school, whose exclusivity is documented by researchers such as Thielens (1957). Where the University of Oriente and the United States medical school differ is in the success students have in completing the program. Thielens writes that although there did exist in the majority of professional schools in the United States a policy of winnowing, many medical schools attempt today, by careful screening, to select at entrance the entire group of students who will graduate. Once accepted for admission to the school, a student has an extremely good chance of remaining there, since seldom more than five per cent of an entering class drop out (p. 145).

At the University of Oriente, once a student has passed the hurdle of "Cursos Básicos," he enters, much to his dismay, an even more exacting obstacle course. In effect, the first two years of preclinical studies serve as another screening device. Reasons for a continued winnowing process in Ciudad Bolívar are understandable: the premedical program is only one year long, compared with three or four years in the United States. Moreover, many of the faculty members are skeptical about the quality of the premedical course, as well as the relevance of the one-year curriculum to the professional training program.

The casualties in the preclinical courses such as anatomy and biochemistry are numerous. In 1968, 28 per cent of the third semester students in anatomy did not have a high enough overall average on mid-term examinations and class assignments to take the final examination. In microbiology, 31 per cent of the fifth semester students were not permitted to take the final examination. In past years, the failure rates in anatomy have been even higher, with as many as 50 per cent of the class repeating the course.

In Table IV-1, we observe that medical students (second cycle) are less satisfied than premedical students (first cycle) with their grades and teachers. Premedical students describe themselves as being generally satisfied with their grades. In fact, premedical students, more than any other group in the University, believe it is easy to get good grades. Generally, they are satisfied with their teachers' competence and report intermediate levels of interaction with faculty.

By the second cycle of professional studies, only one-third of the students (34 per cent) are satisfied with their grades and less than one-fifth (19 per cent) believe their teachers to be fair in evaluating them. Although there is a slight increase in the percentage of students reporting cordial relations with their teachers (36 per cent to 44 per cent) as many as 20 per cent of the advanced students state that their relationships with faculty are reserved or hostile.

The availability of professional role models increases the frequency with which students consult their teachers on vocational matters. Sixty per cent of the students in our sample at Ciudad Bolívar report occasional-to-frequent discussions with teachers about career related problems, as compared with 48 per cent of the premedical students.

Advanced students, however, are very critical of the teachers' competence. They are less satisfied than premedical students with their teachers' knowledge of subject matter; and on a related item, only 11 per cent rate the prestige of their faculty as high compared with other faculty in the University. These exceptionally low evaluations are in direct contrast to collateral data gathered from University files on teacher characteristics. By most criteria used to independently judge the competence of instructors -- length of university training, professional experience, advanced graduate work, and amount of research conducted -- the medical staff is the single most qualified group of professionals in the University. The School of Medicine is also the only school to have established an independent commission with specific criteria for recruiting qualified faculty members both nationally and internationally.

The dissatisfaction of medical students with their instructors is perhaps best understood by citing a comparable study conducted by Becker *et al.* (1961). Many of the problems confronting the students in the United States study are similar to those reported by students in our Venezuelan sample. Becker *et al.* describe the difficult problem of adjusting to the "overload" of work in the freshman year. For many students the most traumatic experience of the first year of medicine is not the first encounter with death in the dissection laboratory, but the fear of not doing well on examinations or being ridiculed by professors.

TABLE IV-1

Differences between Premedical and Medical Students on Indicators of Satisfaction with Teachers and Grades

	% Students	
Item Response:	1st Cycle	2nd Cycle
Occasional or Frequent Talks with Professors Re Class Work	77% (43)[a]	80% (95)[a]
Occasional or Frequent Talks with Professors Re Career Problems	48% (42)	60% (95)
Satisfied with Teacher Knowledge	86% (42)	65% (93)
Most Professors Good Teachers	28% (43)	19% (94)
Cordial Relations with Professors	36% (42)	44% (94)
Satisfied with Teacher Friendship	69% (39)	60% (89)
Easy for Student to Get Good Grades	57% (42)	40% (92)
Satisfied with Grades	67% (43)	34% (95)
Satisfied with Professors' Fairness in Grading	55% (40)	19% (92)

[a] Number of cases on which percentage is based

As students progress into clinical work in the third and fourth years of medical school, faculty evaluations assume a new form. Students are judged less on objective formal examinations and more on their performance in the hospital wards as well as responses to "on-the-spot" quizzes. These evaluations place students in a vulnerable position before the professional staff whom they must attempt to please.[3]

As Becker et al. note, medical schools are "more than any other kinds of schools organized in an 'authoritarian' fashion." "The faculty and administration have a tremendous amount of power over the students and in principal can control students very tightly and cause students to act in whatever fashion they, the faculty, want" (p. 48).

In their study of the University of Kansas Medical School, Becker and his colleagues observed that although students were occasionally critical of instructors, the prospect of students taking direct action against the faculty had disappeared by the end of the first semester. Students had developed the perspective that it was necessary to find out what the faculty wanted and to make a good impression on them (p. 80).

This is not the case in the University of Oriente. Having passed the initial obstacle of "Cursos Básicos" and achieved the goal of entering the School of Medicine, the students are not willing to accept what they consider to be arbitrary and humiliating treatment by faculty members. From our observations of the School of Medicine and interviews with students in Ciudad Bolívar, a substantial number had not agreed to please the faculty, no matter what the cost. Over the past five years, rebellion has not been only latent, but occasionally overt, expressed by collective action of the student body on such peripheral issues as transportation as well as on more central demands for improvements in the curriculum.[4]

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[3] Medical students at Oriente are resentful of these evaluations which they cynically term "ojo porciento" -- the percentage of the grade which is based on being seen by professors. Sixty per cent of a grade in the clinical years is based on teacher evaluations of student work in the hospital, while the remaining 40 per cent reflects scores on objective examinations. The medical students believe that these evaluations are often arbitrary, being based on the appearance rather than the possession of knowledge.

[4] Several reasons come to mind, why rebellion was more overt in the University of Oriente than in the University of Kansas, in the Becker et al. study. First, medical students in Oriente had alternative models with which to compare their medical school. When they complained that anatomy and neuroanatomy were being taught in only one semester, they knew that in all other medical schools in Venezuela, the subjects were

These student demands are not just capricious or reactive to what is considered to be unfair faculty demands. The protests often indicate student concern for the quality of education. The students, for example, reported sending a petition to the school's administration to establish an experimental course in surgery and to procure more animals for them to practice surgery. In the past, they petitioned for the school to keep the dissection laboratory open to the late hours of the night.

At the same time the faculty is a highly conscientious, well-trained group of professionals, dedicated to establishing a first-rate medical school. Contrary to frequently heard student criticisms of them, many professors are genuinely concerned with the students' welfare. Moreover, the school employs one of its faculty members as an assistant to the Dean; the professor is responsible for arranging and scheduling make-up courses for those subjects which a large number of students have failed.

In spite of this mutuality of interests in the quality of education, the School of Medicine at the University of Oriente, not unlike its counterpart in Kansas, illustrates very well the point made by Becker _et al._: "even in the absence of conflicts, superiors in a hierarchy may set tasks that subordinates feel unmanageable, may create situations in which subordinates feel it necessary to defend themselves, or through ignorance of the subordinates' perspective unwittingly do damage to the subordinates' interest" (p. 312).

Medical students in Ciudad Bolívar, although collectively dissatisfied with their plight, are not completely demoralized. They have the security of identifying with a well-established and esteemed profession. In the clinical years (4th through 6th), their work permits them to interact with future clients. And once these students graduate, the probability is favorable that they will find an attractive job with concomitant high social status.

On the other hand, the perception of widespread and continuous deprivations may act as a countervailing force qualifying the influence of the School of Medicine on the professional socialization of its students, and thereby checking the development of a sense of professional

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taught over a period of two semesters. Secondly, the students who were having problems in the University stood a good chance of transferring to other medical schools without much difficulty. Both of these situations are somewhat unlikely in the United States context. Thirdly, the student center of the medical school is well organized and in political opposition to the existing power structure of the University and the present Government. The main difference, however, may be that a large number of students are dropped from the School of Medicine in Oriente, while relatively few are in the United States.

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competency. The percentage of advanced students scoring high on professional efficacy (26 per cent) is actually lower than that among students in the premedical course in Cumaná (33 per cent). Disenchantment with the existing conditions in the school appears to have exacted a toll, if only in a sense of professional efficacy.

In an extreme way, then, our case study of medicine has illuminated what most likely is the condition of students found in other prestigious fields -- not only in the University of Oriente but in other university centers throughout Latin America. Conflict is invariably occasioned by the disproportionately large number of students attracted to careers with high visibility in the society, but which understandably attempt to guard and maintain their exclusivity. The case of medicine is extreme, because of the greater necessity to carefully screen candidates and guarantee the quality of graduates in view of the responsibilities associated with the exercise of the profession.

The obstacles students encounter, therefore, are not so much internally decided by the faculty but externally determined by the close regulation of the profession by national law and the national medical association. Until the level of preparation of entering medical students is sufficiently adequate, attrition rates will most likely continue to be high. However, given an improvement in the quality of students, there is every indication that the faculty would attempt to guarantee the eventual graduation of most entrants.

The Uncertainty of Isolation: Animal Husbandry

Students in academic, scholarly, and technical fields represent the other extreme of high interaction rates with professors, widespread satisfaction with grades, and the uncertainty of knowing what their future is outside the supportive enclosure of the university. Student satisfaction with a supportive academic environment may lead to an optimistic belief about future life chances -- until the belief is tested against actual conditions in society.

Animal husbandry students become increasingly satisfied with their teachers and available rewards distributed in the form of grades (Table IV-2). In the Basic Studies Program they have few opportunities to interact with relevant role models or discuss specific aspects of their career. However, once they enter the School of Animal Husbandry located in a former oil camp on the Venezuelan plains ("los llanos"), they become residents in a small community conducive to high rates of personal interaction.

In Table IV-2, only 42 per cent of the students (in "Cursos Básicos") planning to study animal husbandry report occasionally discussing career plans with teachers, while 88 per cent of the advanced

TABLE IV-2

Differences between Beginning and Advanced Animal Husbandry Students on Indicators of Satisfaction with Teachers and Grades

Item Response:	% Students	
	1st Cycle	2nd Cycle
Occasional or Frequent Talks with Professor Re Class Work	81% (26)[a]	89% (44)[a]
Occasional or Frequent Talks with Professors Re Career Problems	42% (26)	89% (44)
Satisfied with Teacher Knowledge	78% (23)	83% (42)
Most Professors Good Teachers	8% (25)	27% (41)
Cordial Relations with Professors	23% (26)	67% (43)
Satisfied with Teacher Friendship	71% (24)	97% (38)
Easy for Student to Get Good Grades	39% (23)	67% (42)
Satisfied with Grades	60% (25)	57% (44)
Satisfied with Professors' Fairness in Grading	41% (22)	68% (38)

[a] Number of cases on which percentage is based

students in Jusepín report consulting their professors in this area. Student-teacher relations also improve between the first and second cycles of study. As many as 97 per cent of the Jusepín sample feel satisfied with teacher friendship, and 67 per cent describe their relationship with faculty as being cordial (compared with 71 per cent and 23 per cent of the student responses on these respective items in Cumaná).

Although satisfaction with grades does not increase in Jusepín, there is a notable shift in the number who believe their grades are justly determined by professors. Forty-one per cent of the students believe their teachers to be fair in the Basic Studies Program, compared with 68 per cent of the advanced students.

Student evaluations of teacher competence are more favorable in the cycle of advanced studies. They believe their teachers to be more knowledgeable and, with certain reservations, better teachers than do first cycle students.

In spite of the supportive conditions found in the small academic community of Jusepín, there is no significant increase in the percentage of students who feel competent about their future job prospects. Instead, the high incidence of interaction with teachers and discussion of career problems, most likely reflects the insecurity students feel concerning their new career. Several students admitted in private conversations that although their friends from other departments thought the animal husbandry graduates would be successful and have an open field ahead of them, the unstructured nature of their occupation led them to have doubts as to exactly what types of positions existed.

The boundaries of the field are not well defined. Animal husbandry is located in a somewhat ambiguous position between two related but more established disciplines (agronomy and veterinary sciences). The specific thrust of this new specialty -- basic and applied research in the production and improvement of livestock -- is not widely known in the society.

Student comments on open-ended sections of the questionnaire provide insights into the above mentioned problems confronting future graduates in animal husbandry. One student writes that a serious obstacle to finding a job is the "newness of the field -- which is situated between other careers." Another refers to the "discrimination against our career on the part of agronomy and veterinary sciences." And a third student replies "the veterinarians dominate in great part our field of work."

More than other students, about one-fifth of the subjects in animal husbandry (19 per cent) expect to encounter difficulties in competing with graduates from other national universities. One student remarks that he will be probably discriminated against "because of the newness of the school" and the fact that "no one knows just what graduates in this field can do." Another student believes that he is going to face problems because of the "similarity of [his] specialty with that of other disciplines."

Information obtained by advanced students apparently has made them more realistic concerning future job opportunities. Fifty per cent of the advanced students report having received adequate vocational information, compared with 39 per cent of the students in the preparatory cycle. Whereas 54 per cent of first cycle students believe that the probability of getting a desirable job is good, only 36 per cent of the advanced students believe their chances to be very promising. The second cycle students play down their probabilities, perhaps as a safeguard against excessive optimism; they tend to say their chances are "fair."

Although the difficulties confronting animal husbandry students are in some ways unique, in broad outline they are not very different from those of students in other technical, scientific, and academic careers. As a rule, non-professional fields do not have sufficient contacts outside the university environment to be able to guarantee occupational success to its graduates.[5] The problem is particularly severe in the backward eastern region of Venezuela. With the exception of the industrial complex arising at Ciudad Guayana and the oil industry located in Puerto La Cruz-Barcelona, there are few areas with a concentration of light or middle level industries.

Paradoxically, the region requires an input of high level manpower to exploit its natural resources, its coast and rivers, the extensive plains, and rich mineral deposits of the Guayana. Yet there are few existing organizations, aside from government and small, inefficiently run industries, that can presently absorb the scientific and technical output of the University.

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[5] For example, the majority of biology graduates have depended on the University to employ them. In newer engineering fields related to development, such as agricultural engineering, it is not uncommon for students to wait up to six months or a year to find employment for lack of governmental structures to implement demand or because of imperfect market mechanisms.

SUMMARY

Students in well-established professional fields have the security of identifying with highly visible and widely esteemed occupations. However, students entering these fields are subjected to rigorous academic programs that offer few present rewards and confer status only at a distant point in the future. The relative deprivation experienced by these students leads to widespread dissatisfaction with academic environments and more specifically with teachers. Much of the influence a school could exert on its students would appear to be dissipated by the conflict and antagonisms a highly competitive program engenders. Students in medicine and traditional branches of engineering experience no substantial gain in sense of professional efficacy over cycles. Deleterious consequences may also flow from the blockage and frustration of highly committed and otherwise talented students, who are then propelled out of the University or towards inappropriate careers.

Less traditional, scientific, academic, and technical tracks provide supportive environments for students without being able to establish concrete images of future positions available to students outside the University. Students in these fields, therefore, tend to be more satisfied with their academic environment, but generally less certain as to future success as professionals.

CHAPTER V

POLITICAL EFFICACY AND ACTIVISM

In the previous two chapters, we examined the impact of different aspects of the university social structure on the professional-trainee role. We now study the second major role of university students in Latin America, represented by a set of expectations that they will be political critics and activists. We will first sketch the nature of the political orientations of our subjects, delineating the more salient attitudinal and behavioral dispositions of the politically efficacious. In the following chapters, we will explore institutional correlates of political efficacy and activism, examining the relationship between the professional and political role expectations of students.

CHARACTERISTICS OF THE POLITICALLY EFFICACIOUS STUDENT

Our data support one of the findings of Almond and Verba (1965) in their study, The Civic Culture -- the self-confident citizen is likely to be the active citizen (p. 206). In our survey, students with a high subjective sense of political efficacy are not only more politically active and interested, but they are more willing than the alienated to work within the existing democratic political structure of the country to effect change. Their militancy is not confined exclusively to the political realm, nor are their interests focused principally on local issues. Compared with the politically inefficacious, they are more likely to agitate for reform in the occupational realm. The politically efficacious, furthermore, tend to be "cosmopolitans" (serving as mediators between the national political system and the local expression of student dissatisfaction and desire for social change).

The Relationship between Political Efficacy and Activism

Although a substantial body of research establishes a strong association between political confidence and participation in political processes (for example, see Rosenberg, 1954-55; Agger, Goldstein, and Pearl, 1961; Hastings, 1956; Levin, 1960; Dahl, 1961), much of the discussion on student political behavior frequently mistakes student activism, whether in the United States or abroad, as manifestations of alienation. Student activism, however, may also be an expression of optimism in the possibility of change which occurs in periods of upheaval or rapid social mobilization (see Pinner, 1968). Similarly, student radicalism may accord with prevailing social conditions and widely held expectations that students will criticize social injustices and on occasion take direct action. In Latin America, the tradition of student political involvement is strong (for a review of literature and research on student politics, see Arnove, 1967).[1] Scott (1968) notes even though the majority of university students may not be actively involved in politics during periods of institutional normalcy, they "all share a high expectation of having their political actions taken seriously" (p. 77).

To summarize our data, an index of student political participation and interest was constructed.[2] The nine items constituting the index were: 1) leadership position in a student organization, 2) membership in a national or university based political party, 3) interest in the 1968 student center elections, 4) participation in the campaign of a student party to gain control of the student center, 5) participation in student protests, 6) frequency with which subjects discuss student and 7) national politics, 8) interest in the forthcoming 1968 national elections, and 9) participation in the electoral campaign of a political party.[3] (For construction of the index, see Appendix V-1).

When we cross-tabulate student scores on the composite index by their position on the "Political Efficacy Scale," we observe a strong positive association. In Table V-1, 47 per cent of the politically efficacious score high on the index of activism, compared with only 11 per cent of the alienated. Individual correlations between each of the items on the index and political efficacy confirm the above finding.

Concern with the country's welfare penetrates the thoughts of the politically competent. They are more apt to frequently daydream about Venezuela, elaborating plans to solve its problems. In Table V-2, 36 per cent of the high efficacy group often engage in such imaginary excursions, compared with 15 per cent of the alienated group.

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[1] For a study of elites and politics in Latin America, with a section of students and intellectuals, see Lipset and Solari (1967, pp. 343-453).

[2] Throughout the subsequent discussion, we will interchangeably refer to political participation and interest and political activism.

[3] At the time the questionnaire was applied, the national presidential elections were nine months away.

TABLE V-1

Scores on Index of Political Participation and Interest by Political Efficacy

		Score on Political Efficacy			
		Low	Intermediate	High	Row Per Cent of Total
Score on Index of Political Participation and Interest	High	11%	26%	47%	35%
	Intermediate	30%	37%	33%	34%
	Low	59%	36%	21%	31%
		100%	100%	100%	100%
(Number of Cases)		(145)	(423)	(303)	(871)

$X^2 = 92.19$ df = 4 $p < .001$

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TABLE V-2

Frequency Students Daydream about Problems of Venezuela according to Political Efficacy

		Score on Political Efficacy Scale			
		Low	Intermediate	High	Row Per Cent of Total
	Often	15%	21%	36%	25%
Daydreams	Sometimes	52%	62%	54%	58%
	Little or Not at All	33%	17%	9%	17%
		$X^2 = 52.33$	df = 4	$p < .001$	
		100%	100%	100%	100%
(Number of Cases)		(146)	(422)	(302)	(870)

Professional Militancy

The politically competent are more likely to militate as professionals to improve unfavorable work conditions. We asked students the following question.

> Suppose that as a future professional you accept a job and encounter irregularities and work conditions that are contrary to the best exercise of your profession. Moreover, let's suppose that your colleagues are willing to take steps to protest, although the authorities of the institution might take reprisals against you. What would you do?

Although as many as 91 per cent respond that they would protest existing conditions, the politically efficacious are more emphatic about their willingness to militate. In Table V-3, 73 per cent state they definitely would join their colleagues in protesting to authorities, while 53 per cent of the alienated support this course of action.

Democratic Norms and Negative Evaluations

Student evaluations of different aspects of the political system were approached indirectly through open-ended questions. Responses were coded according to whether their frame of reference was positive, negative, or more neutral and analytical. For example, we asked students to complete the following sentence: "The majority of politicians in this country are ...."

A negative response to our question on politicians might be that "they are interested only in their own self-enrichment"; an extremely negative comment, which was not uncommon, would be that "politicians are swine, or parasite, or vermin," etc. Over 90 per cent evaluate politicians negatively.

In part, these negative findings may be attributable to the structure of the question, perhaps forcing a negative response. (It would be interesting to see if North American university students would be as critical of their political leaders.) For our purposes, the item nonetheless shows that the high efficacy students are more negative -- 93 per cent compared with 86 per cent of the low efficacy group (see Table V-4, item #1).

In evaluating the efforts of the present government to resolve the principal development problems of the country, 40 per cent of the high efficacy group is extremely critical, compared with 28 per cent of the low efficacy group. While they are more demanding of the government's performance, the subjectively competent are also more analytical

TABLE V-3

Professional Militancy according to Political Efficacy

	Score on Political Efficacy Scale			
	Low	Intermediate	High	Row Per Cent of Total
Definitely Militate	53%	65%	73%	66%
Probably Militate	35%	26%	20%	25%
Wait and See or Do Nothing	12%	9%	8%	9%
	$X^2 = 19.9$	df = 6	$p < .01$	
	100%	100%	100%	100%
(Number of Cases)	(145)	(419)	(302)	(866)

TABLE V-4

Partial Answers to Open-Ended Questions on the Political System by Political Efficacy

Item:	Score on Political Efficacy Scale: Low	Intermediate	High
1. % Evaluating politicians negatively or very negatively	86%	93%	93%
2A. % Evaluating national government negatively or very negatively	65%	76%	70%
2B. % Evaluating national government analytically[a]	10%	14%	17%
3A. % Supporting party of democratic opposition	15%	18%	28%
3B. % Supporting leftist ideology	16%	24%	35%

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[a] Students evaluate efforts of government, according to historical conditions prevailing in the society and problems to be overcome.

in their responses -- 17 per cent evaluate the government in terms of the many problems confronting it, compared with ten per cent of the alienated (see Table V-4, item #2b).

When we asked what political group or ideology could do more than the present government, fewer of the politically competent offered a negative or pessimistic remark such as "no group is worthwhile" or "all political parties are the same." Instead, 28 per cent of the politically efficacious mention one of the political parties in the democratic opposition as against 15 per cent of the alienated (see Table V-4, item #3a).

Intense student involvement in the problems of a developing country also is likely to lead to more radical political sympathies. The politically efficacious more frequently mention Marxism, Communism, or a leftist ideology in general as alternatives to the present political regime (35 per cent of these students, as against 16 per cent of the alienated).[4] Another eight per cent of the efficacious prefer Christian Democracy to the social democratic philosophy of Acción Democrática. Student radicals, who stood the greatest chance of imprisonment for their political viewpoints, were often the most frank in their expression of opinions concerning the present state of the country.[5]

A particularly interesting finding was that in spite of their general disillusionment with major aspects of the political system, the subjectively competent are less prone to violence and anomic behavior than are the alienated. In response to two Likert-type items, fewer efficacious students agree with the statements that 1) violence is needed to change the political situation in the country, and 2) when people disagree with a government, they should disobey it. On the first item, 56 per cent of the politically efficacious agree with the statement supporting the use of violence, compared with 69 per cent of the low efficacy group (Table V-5). On the other item, 39 per cent believe the public should disobey a government, with 50 per cent of the alienated in agreement with the statement (Table V-6).

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[4] Complementing the tendency of efficacious students to support leftist groups and philosophies is their secularism. Forty-four per cent of the students who define themselves as being atheists or without religious affiliations rank high on political efficacy, compared with 31 per cent of those who are either practicing or nominal Catholics -- the State religion of Venezuela.

[5] Generally, students were reluctant to specify membership in a particular political party. Since many students identify with the Communist Party and the Revolutionary Movement of the Left -- which were banned in Venezuela -- mentioning these parties could have incurred serious risks. On several occasions, while this research was taking place, well-known student leaders or sympathizers of the above parties were jailed. The researcher, therefore, approached the matter of political affiliations through open-ended questions -- asking subjects to evaluate the efforts of the present government to resolve development problems and secondly, what group or ideology could do more for the country. Still, as many as 459 students refused to answer the second item.

When as many as 60 per cent of the students in our sample support violence, and more than half of the politically efficacious agree with this sentiment, we observe that civic norms are imperfectly crystallized. General disillusionment with the older generation of politicians and present party system in the country indicate a disposition among students to work outside, if not against, the existing political structures to effect change -- should political conditions become repressive. As we noted in Chapter II, however, 1968 was a period of optimism about the possibilities of change occurring through the legal channels of national elections.

THE POLITICALLY EFFICACIOUS AS "COSMOPOLITANS"

At the University of Oriente, marginal to the main political currents emanating from Caracas and the central region of Venezuela, the politically efficacious serve as interpreters of national politics. These "cosmopolitans" perform what Stinchcombe (1968) calls the "integration function of shaping the action of the peripheral population of the system in the light of what is happening at the cosmopolitan center" (p. 513). They tend to view university student politics to a far greater extent than do others in terms of the national political scene. In Table V-7, twice as many (44 per cent to 22 per cent of the alienated) believe that student leaders should be influenced in their decisions by political affiliations outside the university. The struggles for institutional reforms within the university are likely to be linked to issues of structural changes within the society (see Arnove, 1967, pp. 45-46).

Because of these views, the politically efficacious are more apt to introduce both a partisan and disruptive note into the academic arena. Although most students would be willing to militate in order to improve academic conditions and student services within the University of Oriente, fewer would support a strike for purely partisan political reasons. In Table V-8, 33 per cent of the politically efficacious, compared with 21 per cent of the alienated, would utilize a strike to suspend classes in the University for the attainment of strictly political goals.

Student evaluations of the efficacy of undertaking political activity within the University of Oriente are more specifically measured

TABLE V-5

"Violence is Needed to Change the Political Situation in this Country" according to Political Efficacy

	Score on Political Efficacy Scale			
	Low	Intermediate	High	Row Per Cent of Total
Agree Strongly	39%	33%	31%	33%
More or Less Agree	30%	27%	25%	27%
More or Less Disagree	19%	23%	20%	21%
Disagree Strongly	13%	17%	24%	19%
	$X^2 = 11.32$	$df = 6$	$p > .05$	
	100%	100%	100%	100%
(Number of Cases)	(146)	(419)	(302)	(867)

TABLE V-6

"When the People Disagree with the Government they Should Not Obey it" according to Political Efficacy

	Score on Political Efficacy Scale			
	Low	Intermediate	High	Row Per Cent of Total
Agree Strongly	21%	16%	20%	18%
More or Less Agree	29%	24%	19%	23%
More or Less Disagree	27%	30%	30%	30%
Disagree Strongly	23%	30%	31%	29%
	$X^2 = 8.82$	df = 6	$p > .05$	
	100%	100%	100%	100%
(Number of Cases)	(143)	(412)	(298)	

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TABLE V-7

"Student Leaders Should Be Influenced in Their Decisions by Political Affiliations or Parties Outside the University" according to Political Efficacy

		Political Efficacy Scale			Row Per Cent of Total
		Low	Intermediate	High	
Answer	Yes	22%	27%	44%	32%
	No	77%	72%	56%	67%
		100%	100%	100%	100%
(Number of Cases)		(142)	(419)	(248)	(859)

TABLE V-8

Agreement with Student Strike for Attainment of Political Objectives according to Political Efficacy

		Political Efficacy Scale			
		Low	Intermediate	High	Row Per Cent of Total
Answer	Yes	21%	29%	33%	29%
	No	79%	71%	67%	71%
		$X^2 = 6.40$	df = 2	$p < .05$	
		100%	100%	100%	100%
(Number of Cases)		(145)	(421)	(303)	(869)

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by a "University Integration Scale." Belief in the efficacy of political action at the national, systematic level is paralleled by a sense of competency toward enacting reforms within the University of Oriente.[6] In Table V-9, 35 per cent of the students who are high on the more general measure of political efficacy rank high on the "University Integration Scale," compared with 12 per cent of the low scoring group.

Differing student positions on the two scales of "Political Efficacy" and "University Integration" may reflect the discrepancy between the power of certain groups within the university and their limitations outside it. For example, the Communist Party, which cannot participate in the national political system, nonetheless manages to win most university elections for student centers.[7] Since students do not officially campaign for a party, but on a ticket which is identifiable by a number, it is possible for representatives of the Communist Party to openly engage in elections. Students who may feel politically powerful at the national level because of their identification with governing parties, stand little chance of making political inroads in the university environment where opposition to the establishment is inveterate.

Some Attitudinal Correlates of Political Efficacy

The politically competent student in our study is similar in many respects to the "cosmopolitan" of Stinchcombe's study on political socialization among the middle class of three South American countries (including Venezuela). Both researchers used items from Kahl's (1965) scales on achievement orientation -- "Activism," "Integration with Relatives," and "Trust." Stinchcombe combined items from the above scales into one composite scale which he used as an indicator of "cosmopolitanism," while we used each of these scales separately.

Data show that there is a constellation of attitudinal dispositions characteristic of the politically competent student as well as the "cosmopolitan" industrial bureaucrat. In our survey, the politically efficacious are more activist in the general sense of believing in the value of planning for the future and being less fatalistic. They are more trusting of strangers and human nature in general. They are willing to leave their family for a good job and prone to use universalistic,

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[6] For construction of a "University Integration Scale," see Appendix I.

[7] Subsequent to conducting our research, the Communist Party was legalized in the spring of 1969.

TABLE V-9

Scores on "University Integration" Scale according to Political Efficacy

		Score on Political Efficacy Scale			
		Low	Intermediate	High	Row Per Cent of Total
Score on University Integration Scale	High	12%	17%	35%	26%
	Intermediate	39%	58%	48%	51%
	Low	49%	25%	17%	23%
		$X^2 = 81.83$	df = 4	$p < .001$	
		100%	100%	100%	100%
(Number of Cases)		(146)	(419)	(302)	(867)

achievement criteria in giving employment to the most competent person rather than a relative. (See cross-tabulations of these attitude scales by political efficacy in Appendix V, Tables V-1,2,3).

Although the politically efficacious tend to be more independent of family ties (as measured by the Kahl scale), their political activism and tendency toward more radical stances is not a general rebellion against parents. Instead, the high political efficacy group report, to a greater extent than the alienated, familial agreement with their political ideas -- 41 per cent of the efficacious students, compared with 35 per cent of the alienated (see Appendix V, Table V-4).

BIOGRAPHICAL INFORMATION

Urban backgrounds and migration from other regions to Oriente are associated with a highly developed sense of political efficacy. A major distinction arises between students who have lived in cities larger than 50,000 for most of their lives, and those from small towns or rural areas. Forty-three per cent of the students from big cities score high on political efficacy, compared with 28 per cent from less urban areas (Table V-10). Students from the two largest cities of Venezuela, Caracas and Maracaibo, are the least likely to be alienated.[8] Only 13 per cent of students from these urban metropolises place in the alienated category, while 31 per cent of students from rural areas feel politically powerless.

Findings on relevant biographical variables confirm the usual tendency for males to be more politically confident and active as well as for nationals to be more politically involved than foreign born. Differences between males and females are even more striking on the index of participation and interest; coed scores probably reflect role expectations that females will not engage in the rough and tumble of politics. On the other hand, belief in the efficacy of the vote and their potential power as citizens and educated elites lead to higher female scores on our measure of political efficacy than on the index of activism. In V-11, half the female students score low on political activism, as against 29 per cent of the males. On the "Political Efficacy Scale," 23 per cent of the coeds place toward the alienated end of the scale, with 14 per cent of the males ranking low on efficacy (Table V-12).

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[8] In 1969, the population of Caracas was approximately two million, and Maracaibo had more than half a million inhabitants.

TABLE V-10

Political Efficacy according to Place Where Students Have Lived Longest

Score on Political Efficacy	City or Town Under 50,000	City Over 50,000
High	28%	43%
Intermediate	51%	44%
Low	21%	13%
	100%	100%
(Number of Cases)	(473)	(359)

TABLE V-11

Scores on Index of Political Participation and Interest by Sex

		Female	Male
Index of Political Participation and Interest	High	18%	36%
	Intermediate	32%	36%
	Low	50%	29%
		$X^2 = 43.62$ df = 2	$p < .001$
		100%	100%
(Number of Cases)		(258)	(627)

TABLE V-12

Scores on Political Efficacy Scale by Sex

		Female	Male
Political Efficacy Scale	High	25%	39%
	Intermediate	52%	47%
	Low	23%	14%
		$X^2 = 19.27$ df = 2	$p < .001$
		100%	100%
(Number of Cases)		(253)	(620)

Social Class

Survey research tends to corroborate the political powerlessness of lower class citizens, whose position in the social hierarchy and lack of resources (including interaction skills, political knowledge, and precarious economic circumstances) are likely to bar active participation in the political decision making process (for example, see Levin, 1960). In our study, there is a slight tendency for upper class students to be more politically efficacious -- 40 per cent of the students from the middle to upper strata, compared with 33 per cent from the lower two strata -- although these small differences may be attributed to upper class students coming from predominantly urban areas.

More significant, however, is the finding that the overall increase in political efficacy at the University between the first cycle of "Cursos Básicos" and the second cycle of professional schools is largely accounted for by students from lower middle and lower class backgroundss. As students from the lower strata become increasingly integrated into the university milieu, they appear to gradually assume many of the characteristics of individuals from elite backgrounds; they also more confidently assume the political roles society expects them to play. In Table V-13, we note that whereas the upper two strata actually drop in political efficacy, and the middle stratum increases by five per cent, the lower two strata combined increase by more than ten per cent -- the lower middle class by 13 per cent and the lower class by eight per cent.

Whatever demographic or biographical factors may be contributing to a sense of political efficacy (such as maturation), we find it difficult to explain how these factors selectively affect the relationship between social class and efficacy over cycles in the University. Rather, the search for an explanation of the increase in political efficacy, especially among the lower social classes, leads us to the general problem of determining what experiences in the University affect student images of their future roles as political actors.

SUMMARY

In this chapter, we have explored the relationship between political efficacy and activism. The student who feels politically competent is likely to be more active and democratically inclined. He believes in the possibility of social change and will tend to agitate for reforms at the national and local levels as well as in the occupational realm. On the other hand, his militancy may be narrowly sectarian and have disruptive consequences for the academic sphere. Moreover, negative evaluations of the existing political regime and advocacy of violence -- which is not

TABLE V-13

Percentage of Students Scoring High on Political Efficacy by Socioeconomic Status and Cycles of Study

Socioeconomic Status	Upper and Upper Middle Classes		Middle-Middle Class		Lower Middle Class		Lower Class	
Cycle	1st	2nd	1st	2nd	1st	2nd	1st	2nd
% High on Political Efficacy	48%	38%	37%	42%	28%	41%	26%	34%
(Number of Cases)	(25)	(32)	(60)	(70)	(176)	(220)	(113)	(174)

substantially different from that of the alienated -- pose problems for the future. If these students were to become frustrated in their aspirations, which is a strong possibility given the increase in efficacy among lower class students over cycles in the University, they could be easy converts to extremist movements bent on overturning the present political system. What impact the University has on the students' political orientations, either in developing a sense of political efficacy or in frustrating students' mobility drives, will be studied in the following chapters.

CHAPTER VI

THE RELATIONSHIP BETWEEN THE PROFESSIONAL AND POLITICAL ROLE PERCEPTIONS OF STUDENTS

Much of the literature on university student agitation presumes that students are dissatisfied with their educational environments and uncertain as to their future positions in society. Researchers (such as Lipset, Pinner, and Scott) have pointed to the high occurrence of activism among students in humanities and social sciences, fields whose subject matter and career patterns are not clearly defined; these students are contrasted with those of scientific and professional disciplines, which offer well organized training programs and lead to secure statuses in society. Confronting an uncertain future, students may participate in radical movements aimed at increasing the supply of high-ranking positions and wealth to which they aspire (see Goldrich and Scott, 1965).

In this chapter, we will examine some of these contentions, focusing on the relationship between the professional and political role perceptions of students at the University of Oriente. We will first study at the individual, psychological level, the association between professional and political efficacy. Then, we will attempt to show how different aspects of the university's social structure -- both its internal reward systems and nexes to desired statuses in the surrounding society -- influence students' political orientations.

THE RELATIONSHIP BETWEEN PROFESSIONAL AND POLITICAL EFFICACY

One of our principal hypotheses was that when students are alienated from their prospective occupational roles they will be alienated from political roles as well. We reasoned that a university could most directly influence a student's sense of competency by preparing him adequately for his future career. Blockage or frustration in this area of important ego commitment would generalize to self-evaluations of one's competency as a political actor.

Our data support the hypothesis that professional efficacy is positively correlated with political efficacy. Although we would like to argue that professional efficacy antecedes political efficacy, we lack direct evidence on the time order of our variables. We, therefore, more cautiously refer to the two variables as being correlated.

Table VI-1 shows that nearly twice as many students who are high on professional efficacy rank high on political efficacy. Forty-six per cent of the students who feel confident about their future professional roles also feel politically competent, compared with 25 per cent of the low efficacy group. Only ten per cent of the high professional group feel politically powerless.

PROFESSIONAL EFFICACY AND POLITICAL ACTIVISM

The relationship between professional efficacy and political activism, however, is not directly evident. The association between scores on the professional efficacy scale and the index of political participation and interest is not significant (chi square test $p > .05$). Whatever small percentage differences are found between the two variables disappear when we control for political efficacy.

RELATIONSHIP AMONG VARIABLES

Thus, we observe that professional efficacy is directly associated with political efficacy, which in turn is substantially associated with political activism. In Chapter III, we established the relationship between different aspects of the university social structure and professional efficacy: students who interact with significant and rewarding teachers, engage in professionally relevant tasks, and identify with prestigious careers tend to rank high on efficacy. The connecting links between the variables in our model are presented in the following diagram.

TABLE VI-1

Scores on the Political Efficacy Scale by Professional Efficacy

		Professional Efficacy Scale		
		Low	Intermediate	High
Political Efficacy Scale	High	25%	36%	46%
	Intermediate	49%	50%	45%
	Low	26%	14%	10%
		$X^2 = 35.72$	df = 4	$p < .001$
		100%	100%	100%
(Number of Cases)		(259)	(417)	(189)

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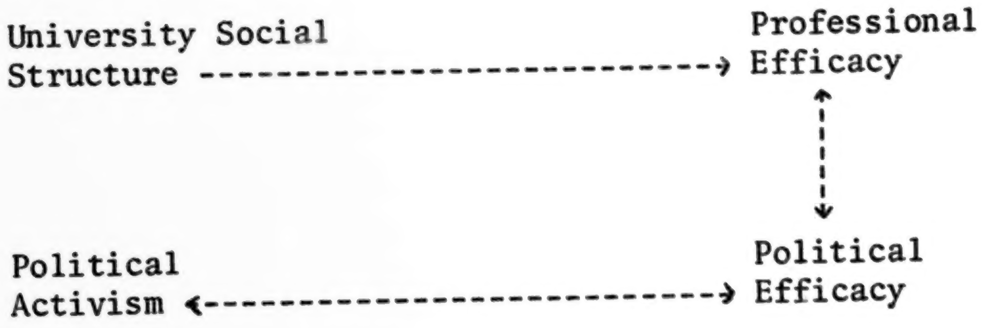

In the diagram, the lines between the university social structure and political efficacy as well as activism remain to be defined. There is no direct link between professional efficacy and activism. Political efficacy, however, is substantially associated with both activism and professional efficacy. We, therefore, view political efficacy as "mediating" the relationship between these two variables.

Although the time order of variables in our model is somewhat of a problem, we present the direction of causal influence as being less ambiguous between the university social structure and professional efficacy. A strong argument exists for considering variables, such as relevant work experiences and career prestige, as influencing the development of a sense of professional competency.

INSTITUTIONAL CONTEXT OF POLITICAL EFFICACY AND ACTIVISM

Does a university social structure also influence political orientations of students? How do career patterns, job opportunities, and other aspects of the curriculum, such as relevance of studies to the political system, affect political efficacy and activism?

Political Efficacy

In order to determine the effect of university training experiences on student identification with citizenship roles, we cross-tabulated political efficacy by departmental prestige and the index of interaction and rewards. Our evidence fails to establish a strong argument for a direct relationship between these variables and political efficacy. Of the two independent variables, there is a slightly stronger tendency for satisfaction on the index of interaction and rewards to be associated with political efficacy; 37 per cent of the satisfied students, compared with 29 per cent of the dissatisfied, rank high on political efficacy. The statistical difference, however, is not significant (chi square, $p > .05$).

Political efficacy appears to be a measure of a general, underlying dimension of self-esteem which is not directly based on specific institutional features of a university. Students' positive evaluations of themselves as political actors reflect, in part, societal expectations that they will be effective participants in political change. Background factors, such as the family's political orientations and support for the student's participation in politics, also appear to be important determinants of political efficacy. Within the university training experience of individuals, an important correlate of political efficacy is a sense of competency developed in anticipatory professional roles.

Political Activism

By contrast with political efficacy, activism may be more directly rooted in aspects of the institutional setting. Frustrations with a depersonalized, bureaucratic university structure and the absence of future role models have both been cited as possible causes of student revolts that have wracked a number of universities internationally in the mid-1960's.

Activism and Student Evaluations of the Academic Setting

To determine the impact of different academic environments on activism, we cross-tabulated the index of political participation and interest by our index of interaction and rewards. The findings, although not statistically significant, are substantively important. There is a slight positive relationship between satisfaction with an academic environment and political activism. In Table VI-2, 38 per cent of the students reporting low interaction with teachers and dissatisfaction with grades score low on activism, compared with 33 per cent of those more satisfied. The percentage difference is not substantial; nevertheless the evidence runs contrary to the expectation that activism is a manifestation of student dissatisfaction with their institutional environments.

Studies conducted in the United States, and particularly during the Berkeley student revolt of 1964, support our findings. As Somers (1964) notes:

> ... It is useful to point out some features of the different groups that run counter to expectations.

TABLE VI-2

Political Participation and Interest by Satisfaction with University Training Experiences

		Position on Index of Interaction and Rewards		
		Low	Intermediate	High
Position on Index of Political Participation and Interest	High	32%	31%	30%
	Intermediate	31%	34%	37%
	Low	38%	35%	33%
		$X^2 = 2.71$	df = 4	$p > .05$
		100%	100%	100%
(Number of Cases)		(450)	(191)	(244)

> I have already noted that dissatisfaction with their general university experience is low among students here and apparently has to be discounted as an explanation of the rebellion (p. 542).

Similarly, the Paulus' (1967) study of activism at Michigan State fails to establish a relationship between dissatisfaction with college and radical politics (also see Peterson, 1968, pp. 304-05).

Activism and Clarity of Career Patterns

Another important factor influencing the militancy of students is the nature of their future positions in society. Scott (1968), for example, notes that fields with less established norms or easily identified career patterns leading to high status positions are more likely to be characterized by student activism of the radical-reform type (p. 81). (Also see Lipset, 1968; and Pinner, 1968.) Somers, in his study of Berkeley, found evidence that there were considerably more militants from social science and humanities fields than from the professional specializations of medicine and engineering.

We decided to test the relationship between the prestige of a field -- a good indicator of the clarity and status of a career in Venezuelan society -- and student involvement in politics. The above studies suggested that we would find a negative correlation -- the lower the prestige of a field, the greater the likelihood that students would be active. Our findings, however, go in the opposite direction. The higher the prestige of a field, the higher is the level of political participation and interest. Thirty-five per cent of the students in the prestigious fields of medicine and engineering score high on political activism, compared with 24 per cent of the low prestige departments of biology, sociology, and animal husbandry (Table VI-3).

In part, these positive findings may be a result of the militancy of medical students, which is traditional in Latin countries. Lipset (1968) draws our attention to the occurrence of this phenomenon, which is "uncommon in the United States, most of northern Europe and the anglophonic world." He writes: "In the Catholic world, this orientation stems from the historic conflict between science and the church, a tension relatively absent from the politics of most Protestant countries" (p. 17).

However, we would still find it difficult to explain the militancy of students in the different branches of engineering, a discipline seldom associated with student radicalism either in Latin America or the United States. Moreover, why should sociology students, whose field is specifically related to social problems and issues, collectively score low on the index of political participation and interest?

TABLE VI-3

Index of Political Participation and Interest by Global Prestige of an Academic Field

		Prestige of Academic Field		
		Low	Intermediate	High
Index of Political Participation and Interest	High	24%	29%	35%
	Intermediate	34%	36%	34%
	Low	42%	35%	30%
		X^2 = 13.19	df = 4	p = .01
		100%	100%	100%
(Number of Cases)		(244)	(191)	(450)

The direction of our argument is that political activism is better understood in relation to the future status gains certain academic fields can offer to their students. The data in Table VI-4 demonstrate that the higher the prestige of a career and the perceived probability of obtaining a good job, the more likely an individual will express higher levels of political participation and interest. Moving diagonally across Table VI-4 from the lower left-hand cell, we observe the lowest level of activism (14 per cent) among students in the least advantageous position (low prestige field and poor probability of finding work); under more positive conditions, 38 per cent of the students, located in prestigious fields and believing their chances of finding a desirable job are good, attain high scores on the index of activism.

Relevance of Field

Another important aspect of a school's academic environment is the relevance of its curricula to social issues and whether graduation will lead to government employment. The militancy of humanities and social science students -- in addition to the lack of clear career patterns and rigorous training programs -- may also be traceable to the concern of those disciplines with normative and philisophical issues. Moreover, radical politics may be associated with the fact that a principal source of employment, the public sector, cannot possibly offer enough attractive positions to assimilate expanding numbers of university graduates.

To test this postulate, we first classified departments on the basis of their relevance to the political system -- fields whose curricula focus on social and public issues, or with career lines leading to employment by the public sector. Relevant fields are sociology, medicine, natural resources (geological, mining, and petroleum) engineering, agricultural engineering, and administration. Less relevant fields are the basic and applied sciences of mathematics, physics, biology, chemistry, and animal husbandry, plus the more established branches of engineering -- chemical, electrical, and mechanical.

We then cross-tabulated political activism by relevance of a field to the political system. There is a slight tendency for students in more politically relevant fields to be higher on activism -- 35 per cent of these students, compared with 27 per cent from less relevant departments (Table VI-5).

We note that relevant fields (such as medicine, natural resources engineering, and agricultural engineering) also tend to be prestigious. When we look at political activity by both prestige and relevance of field, the effect of each variable is discernible (see Table VI-6). Although prestige works in a more consistent way in influencing higher

TABLE VI-4

Three-Variable Table -- Percentage Scoring High on Index of Political Participation and Interest by Prestige of Field and Probability of Getting Desirable Job

(% in each cell scoring high on index)

		Prestige of Field		
		Low	Intermediate	High
Probability Get Job	Excellent-Good	33% (77)	33% (86)	38% (162)[a]
	Fair	24% (96)	33% (52)	37% (137)
	Bad-Very Bad or Don't Know	14% (71)	18% (45)	31% (147)

[a] Number of cases on which percentage is based

TABLE VI-5

Scores on Index of Political Participation and Interest according to Relevance of Academic Field to the Political System

		Political Relevance	
		Low	High
Political Activism	High	27%	35%
	Intermediate	37%	32%
	Low	36%	33%
		$X^2 = 6.78$ df = 2	$p < .05$
		100%	100%
(Number of Cases)		(487)	(398)

TABLE VI-6

Three-Variable Table -- Percentage Scoring High on Index of Political Participation and Interest by Political Relevance of Field of Study and Global Prestige of Department

(% in each cell ranking high on index of political involvement)

		Relevance of Field	
		Low	High
Global Prestige of Department	High	33% (214)	37% (236)[a]
	Intermediate	22% (114)	40% (77)
	Low	23% (159)	26% (85)

[a] Number of cases on which percentage is based

levels of activism, relevance of field nonetheless has an impact on political participation and interest.

In Table VI-7, we look at the combined effect of relevance of field and probability of finding a good job. Again, our findings run contrary to the expectation that frustration with future employment opportunities (particularly jobs dependent on the state of development of the public sector) leads to political militancy. Thirty-eight per cent of the subjects in relevant fields who perceive their probabilities of finding employment favorable rank high on activism, compared with 33 per cent who are less optimistic or uncertain about job opportunities. The smallest percentage of active students (16 per cent) are those who are both pessimistic and in less relevant fields.

COMBINED EFFECT OF POLITICAL EFFICACY AND UNIVERSITY SOCIAL STRUCTURES ON POLITICAL ACTIVISM

We have separately demonstrated the positive effect of political efficacy and different structural variables on political activism. Our next query is: does the individual dimension of political efficacy combine with the variables of prestige and relevance of a school to produce higher levels of activism?

A number of multidimensional tables were generated to determine the combined effect of these variables on political involvement. The most politically participant are those who feel politically competent and find themselves in prestigious and politically relevant fields with favorable job prospects. More than half (56 per cent) of the politically efficacious students located in both relevant and prestigious contexts score high on activism. At the opposite end, less than ten per cent score high on activism, who in addition to feeling politically powerless, are in less relevant and prestigious tracks (see Appendix VI, Table VI-3).

From the foregoing analysis, it would appear that a strong case exists for the contention that political involvement is positively influenced by 1) an individual's self-evaluations of his competency as a political actor, 2) his perceptions of future life chances, and 3) the actual connections of a school to the surrounding social order -- that is, the prospects a school offers of concrete status gains for students.

TABLE VI-7

Three-Variable Table -- Percentage Scoring High on Index of Political Participation and Interest by Political Relevance of Field and Probability of Getting Desirable Job

(% in each cell scoring high on political index)

		Relevance of Field to Political System	
		Low	High
Probability Get Job	Excellent-Good	33% (186)	38% (139)[a]
	Fair	29% (167)	36% (118)
	Bad-Very Bad or Don't Know	16% (128)	31% (135)

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[a] Number of cases on which percentage is based

THE MODEL AND PROBLEMS OF CAUSAL ANALYSIS

In Figure 6-1, we summarize the relationships between variables of our model, taking into consideration the problem of causal analysis: lacking data gathered at different points in time, it is difficult to state, for example, whether professional efficacy antecedes political efficacy or vice versa. Similarly, although we assume that political efficacy precedes political activism, it is equally plausible for successful participation in political events to strengthen feelings of political efficacy. Briefly, the direction of influence can go in either direction between several sets of variables.

As indicated earlier in the chapter, a strong case exists for assuming that evaluations of different aspects of the university social structure (particularly career prestige) influence students' professional efficacy and activism. The line connecting activism and the university social structure is drawn directly to the variable of career prestige (which was found to be more substantially associated with activism than the internal reward system). We reasoned above that clarity of a student's career pattern (as indicated by occupational prestige) would be directly related to his involvement in politics. Prestige is also presented as influencing the way in which faculty interact with students. As we observed in Chapter III, and in our case study of medicine, a negative correlation exists between the variables of prestige and student satisfaction with teachers and grades.

Arrows are drawn in Figure 6-1 from the environment to the university social structure, representing the concept of a "charter," or societal definitions of the institution's products and the connections that exist between training experiences and positions in the society. The other arrow drawn from the environment to the variable of political efficacy represents the set of expectations that students will be political critics and participants. Although connecting links between other variables and the surrounding society can be drawn, doing so would complicate the model more than is necessary.

Another problem in our model is how to explain the overall increase in political efficacy across departments over years of study, while professional efficacy remains essentially at the same level. Political activism also increases by 13 per cent over cycles in the University, although several important predictors (perceptions of career prestige and job opportunities) do not show a concomitant upsurge in frequency rates.[1] We will look at these problems in the following chapter.

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[1] In "Cursos Básicos," 60 per cent individually perceive the prestige of their field as being high and 43 per cent believe the probability of obtaining a desirable job to be good; in the second cycle of

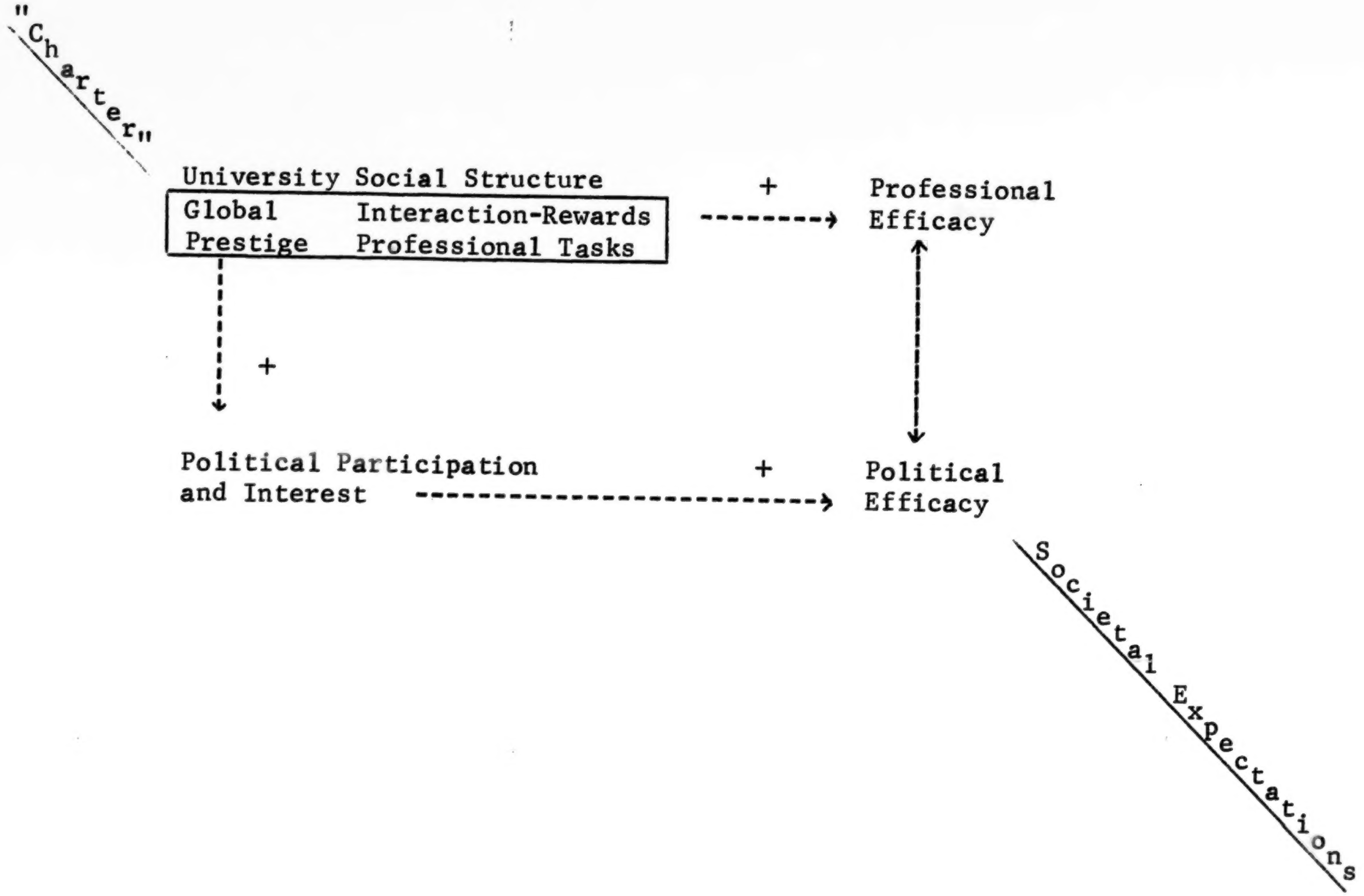
"Charter"
University Social Structure
Global
Interaction-Rewards
Prestige
Professional Tasks
+
Professional Efficacy
+
Political Participation and Interest
+
Political Efficacy
Societal Expectations

FIGURE 6-1: Relationships between Variables

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SUMMARY

In this chapter we have completed the objective of determining what relationships exist between the major variables of our model (see Figure 6-1). Although we demonstrated a direct association between professional and political efficacy, we were unable to prove that political efficacy is directly based on institutional features of the university. By contrast with political efficacy, student activism has a stronger, more direct relation to structural aspects of the university, particularly those features that lead to increased status outside the institution. Students enrolled in prestigious and politically relevant fields, who believe they are destined to occupy desirable positions in Venezuelan society, tend to be more politically participant.

Political efficacy is rooted more in the individual's sense of overall competency. A sense of efficacy developed as a professional trainee will tend to be positively associated with feelings of political competence.

The question is: how do we determine if professional efficacy antecedes political efficacy? In the next chapter we will be concerned with several aspects of this problem, in addition to explaining how it is possible for political efficacy and activism to increase over cycles of study in the University while professional efficacy, evaluations of occupational prestige, and perceived job opportunities do not.

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studies, the percentages are 62 per cent and 35 per cent on the respective items. The percentage of students ranking high on the index of political participation and interest increases over cycles from 23 per cent to 36 per cent.

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CHAPTER VII

STUDENT POLITICAL INVOLVEMENT -- AN EXPRESSION OF OPTIMISM

In this chapter we will advance the argument that intense involvement in the political realm represents one form of interaction and manipulation of the students' environment; successful preparation for the performance of occupational roles represents another. Differently viewed, anticipatory socialization into adult political and professional roles constitute two distinct but related paths to achievement and status in Latin American society.

To establish a case for this argument, we will explore the evidence for two rival hypotheses: 1) that student involvement in politics is an outgrowth of frustrated commitment within the university, and 2) that it is a reaction to blocked mobility drives and status inconsistency in the larger society.

With regard to the first thesis, data presented in the previous chapter tended to support the view that student involvement in politics is partly a manifestation of confidence gained in the professional-trainee role. However, our problem is that a large area of student activism remains unexplained by the variables of internal reward systems, departmental prestige, and occupational opportunities.

Equally plausible is the hypothesis that politics represents an area of substitute achievement for students blocked in their mobility drives. Neither dissatisfaction with the academic environment nor uncertainty over future opportunities for advancement by themselves lead directly to activism -- rather it is the discrepancy between status aspirations and opportunities in the society that spurs the student to redress grievances in the political arena (see Bakke, 1964).

FRUSTRATED COMMITMENT AND POLITICAL ACTIVISM

To test the first rival explanation of student involvement in politics, we constructed an index of commitment to completing studies in the university (see Appendix IV-1). The index consists of the following five items: 1) when the decision was made to pursue present career line, 2) if the student would enroll again in the same specialty, and 3) would the student leave the university for a good paying job, 4) importance student assigns to completing his university studies, and 5) sacrifices made by family because student attends the university.

These items correspond, in part, to Becker's (1960) concept of commitment as a "side bet." According to him, the major elements of commitment involve 1) the individual being in a position in which his decision with regard to some particular line of action has consequences for other interests and activities, 2) he has placed himself in the present situation by his own prior actions, and 3) the committed person must be aware that he has made the "side bet" and must recognize that the decision in this case will have ramifications beyond it (pp. 35-36).

Students were dichotomized into high and low commitment groups on the basis of their answers to the different items. We then determined how students in the two groups scored on an index of "perceived academic facilitation," which included these items: 1) degree to which students believe academic problems could prevent them from graduating, and 2) evaluations of the probability of completing university studies (see Appendix VII-1, for construction of index).

On the basis of scores on the two indices -- commitment and academic facilitation -- four types of individuals were identified:

Type I -- High Commitment, High Facilitation
Type II -- High Commitment, Low Facilitation
Type III -- Low Commitment, High Facilitation
Type IV -- Low Commitment, Low Facilitation

According to the rival hypothesis we are examining, students with high commitment and low perceived facilitation (Type II), should be the most frustrated and, hence, the most politically active. In Table VII-1, we observe that generally high "investment" in the academic area is associated with higher levels of political involvement, whether the student perceives obstacles or not. Thirty-six per cent of the committed rank high on activism, compared with 25 per cent of the uncommitted. The most active group consists of students with both high commitment and facilitation (see Appendix VII, Table VII-1 for political efficacy by types of commitment). Although the percentage differences are not great, the important point is that the data do not substantiate the rival hypothesis.

TABLE VII-1

Percentage Ranking High on Political Participation and Interest by Types of Committed Individuals

(% in each cell ranking high on political involvement)

		Commitment	
		Low	High
Academic Facilitation	High	Type III 22% (177)	Type I 37% (265)[a]
	Low	Type IV 27% (213)	Type II 34% (230)

[a] Number of cases on which percentage is based

Commitment and Political Involvement at Different Points in the Curriculum

The above hypothesis was further tested, controlling for cycle of study. The effect of frustrated commitment on student political involvement, we reasoned, might be greater at different points in the student's progression through the University.

Table VII-2 shows the relationship between student commitment and political activism, according to cycle of study. In the cycle of Basic Studies, the most politically involved are (as had been predicted) those who are frustrated in their commitment -- 29 per cent of this group, compared with 20 per cent of the high facilitation students. However, by the second cycle of professional studies (when there is an overall upsurge in political interest and participation) Type II individuals are less active than Type I. Forty-six per cent of the students who are committed and facilitated rank high on our measure of political involvement, as against 39 per cent of those who are committed, but perceive obstacles preventing them from graduating. (Still, to accord some credit to the counter hypothesis, we observe that among second cycle students both commitment and frustration contribute to a higher level of activism than is found among students who are blocked but uncommitted.)

The above pattern also applies to the students' sense of political efficacy. In "Cursos Basicos," Type II subjects (high commitment, low facilitation) are the most politically efficacious, but by the advanced cycle of studies, relatively fewer score at the upper end of the scale (Table VII-3). The one group which stands far above the others in high overall political efficacy is Type I -- students whom we would expect to be least alienated because of their high commitment and perceived facilitation.

The relatively lower rates of activism and efficacy found among Type II individuals in the second cycle of studies is somewhat puzzling. Two plausible explanations come to mind immediately: 1) these students drop out of the University because of the academic problems they have, or 2) they become disillusioned and "drop out" in the sense of psychic identification with and social involvement in the political area. The fate of these students, however, remains an area for further speculation and examination.

The difficulty in working with the variables of commitment and perceived obstacles is again that of determining which is prior to the other. Although there are several grounds for believing commitment is prior -- for example, the item concerning when choice of career was made -- perceived blockage could easily lead students to play down their commitment to the university. Correlatively, firm belief in the possibility of graduating would contribute to higher scores on the commitment scale -- that is, positive responses to enrolling again in the same specialty,

TABLE VII-2

Percentage Ranking High on Political Participation and Interest by Types of Committed Individuals, Controlling for Cycles of Study

1st Cycle

(% in each cell ranking high on political involvement)

		Commitment	
		Low	High
		Type III	Type I
Academic Facilitation	High	20% (59)	20% (91)[a]
		Type IV	Type II
	Low	22% (110)	29% (115)

2nd Cycle

(% in each cell ranking high on political involvement)

		Commitment	
		Low	High
		Type III	Type I
Academic Facilitation	High	22% (118)	46% (174)[a]
		Type IV	Type II
	Low	33% (103)	39% (23)

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[a] Number of cases on which percentage is based

TABLE VII-3

Percentage Ranking High on Political Efficacy by Types of Committed Individuals, Controlling for Cycle of Study

1st Cycle

(% in each cell ranking high on political efficacy)

		Commitment	
		Low	High
Academic Facilitation	High	Type III 24% (59)	Type I 32% (92)[a]
	Low	Type IV 26% (110)	Type II 36% (113)

2nd Cycle

(% in each cell ranking high on political efficacy)

		Commitment	
		Low	High
Academic Facilitation	High	Type III 34% (117)	Type I 46% (170)
	Low	Type IV 36% (100)	Type II 33% (112)

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[a] Number of cases on which percentage is based

choosing to continue with studies when confronted with a good job offer, and assigning maximum importance to completing studies.

STATUS INCONSISTENCY, BLOCKED MOBILITY AND POLITICAL ACTIVISM

Having failed to find convincing evidence for the argument that student involvement in politics is a reaction to obstacles encountered within the university, we turn to an examination of political activism in relation to blocked mobility drives and status inconsistency in the society. This approach would appear to resolve the problem of causal analysis, since the subjects' family background is clearly prior to their present evaluations of social class standing. Moreover, a number of studies conducted on identity crises of intellectual elites in transitional societies, attribute their involvement in radical political movements to discrepancies between the elevated images they hold of themselves and the marginal statuses they frequently are forced to occupy (see Soares, 1967; Prates, 1966; Bakke, 1964; also Shils, 1960).

In a review of the political and social consequences of mobility, the Latin American sociologist Germani (1966) notes that "the rising expectations of newly educated groups remain unsatisfied because other groups -- foreign or domestic -- virtually monopolize the higher positions available in the society, or because the new supply of educated persons exceeds the demands or fails to correspond to the specific technical or intellectual skills required." "Typically," writes Germani, "the groups affected try to remove the obstacles blocking their social ascent and in doing so become innovating or revolutionary groups" (p. 372). (Also see Levy, 1955; Hagen, 1962; Ringer and Sills, 1952.)

Lenski (1954) and Goffman (1957) have looked at a desire for change in the distribution of power in a society in relation to the degree of status consistency or crystallization experienced by individuals.[1] Examples of differences in rank in social, economic, and occupational hierarchies which might create stressful situations demanding changes in the individual's environment might appropriately be the following: the divergence between the elevated social status of a university graduate and the lower level economic position in which he finds himself as a result of poorly remunerated work; or the discrepancy between high ranking economic status and lower level professional status might be a problem which would occur when a graduate is attracted to jobs with high payoffs but little professional challenge and respectability.

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[1] The research by Lenski (1954) and Goffman (1957) initiated a chain of studies by other researchers (for example, see Simpson, 1969).

Goffman (1957) revises Lenski's original formulation by adding to the variable of inconsistency in statuses, the condition of perceived opportunities for upward mobility. He hypothesized that "The degree of status consistency is inversely related to the extensiveness of preferences for change in the distribution of power when experienced opportunities for upward mobility are low" (p. 279).

As an indication of status consistency, we looked at the match between student evaluations of their present social class standing and our independently determined index of socioeconomic status. On the basis of answers to an open-ended item on social class, students were dichotomized into two groups: 1) middle and upper classes, and 2) lower and working classes. Students were similarly dichotomized according to their position on the index of socioeconomic status.

Status consistent types are those subjects who, for example, rank at the lower end of the socioeconomic index and perceive themselves as belonging to the lower or working class. Middle and upper class students who identify themselves as such or as belonging to a professional class are also considered as being status consistent.

Lower middle class students represent a borderline case. Seventy-nine of the 400 students from this transitional class (20 per cent) were grouped with the lower class on the basis of their responses to two items, which were found to be substantially associated with lower class status. These students responded that 1) it was never assumed in their family that they would be able to attend a university, and 2) economic problems represent a serious obstacle to completing their studies. The remaining 321 students were identified as belonging to the middle class.

Inconsistent types can be either upwardly or downwardly mobile. Sixty-five per cent of the students who are from lower class backgrounds evaluate themselves as belonging to the middle class. These students can be considered to be upwardly mobile. The other inconsistent group consists of the twenty-five students with middle class status on our index, but who identify with the working or lower class and perceive their opportunities for success as being dim.[2]

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[2] There are also eight students with middle class status who identify with the "proletariat" and lower class, but who believe they are getting ahead. It, therefore, would be difficult to define these students as being downwardly mobile.

According to the rival hypothesis we are examining, the most politically active should be the status inconsistent subjects who perceive opportunities for upward mobility to be low. In order to test this hypothesis, we look at the combined effect of status consistency and perceived blockage on rates of political activism. To measure perceived obstacles we use an index that includes the two items on academic facilitation, plus a third item -- student evaluations of the probability of finding a desirable job (see Appendix VII-1, for construction of an index of overall obstacles).

Contrary to our expectations that blocked mobility would lead to the highest overall level of activism, the most politically involved students tend to be those who are both status consistent and believe themselves to have a good chance of graduating and finding an attractive job. In Table VII-4, the least active students are 1) lower class subjects who perceive their path to status blocked, and 2) the small group of downwardly mobile subjects from the middle class, who perceive a loss of status.

To simplify the data in Table VII-4, we merged the different groupings into two basic types -- status consistent and inconsistent subjects. Thirty-five per cent of the status consistent and facilitated students rank high on political participation and interest, compared with 27 per cent of the blocked and status inconsistent subjects (see Appendix VII, Table VII-2). Although the percentage difference is small, the important point is that the results go in a direction opposite to that predicted by the rival hypothesis.

The impact of status consistency on the political orientations is more striking when we turn to an examination of political efficacy. In Table VII-5, we observe that status consistency -- contrary to rival arguments -- is more predictive of political efficacy: forty-three per cent of lower class students who are status consistent rank high on political efficacy, compared with 29 per cent of the status inconsistent subjects.

CLOSENESS TO MARKET AND POLITICAL INVOLVEMENT

As students advance through the University and approach graduation, both the variables of status consistency and perceived obstacles have a more substantial impact on feelings of political efficacy. These variables have little influence on students during the introductory cycle of "Cursos Básicos." In Table VII-6, 54 per cent of the most advantaged students (in the cycle of professional study) rank high on political efficacy, compared with 29 per cent of the least advantaged (blocked and

TABLE VII-4

Percentage Ranking High on Political Participation and Interest by Status Consistency and Overall Facilitation

Middle-to-Upper Socioeconomic Status

		Student Evaluation	
		Lower or Working	Middle or Upper
Perceived Obstacles to Graduating and Finding Employment	Low	Inconsistent X[a]	Consistent 35% (127)
	High	Downwardly Mobile 16% (25)	Consistent 32% (314)

Lower Socioeconomic Status

		Student Evaluation	
		Middle or Upper	Lower or Working
Perceived Obstacles to Graduating and Finding Employment	Low	Upwardly Mobile 30% (61)	Consistent 37% (19)
	High	Upwardly Mobile 28% (230)	Consistent 25% (64)

[a] Fewer than ten cases

TABLE VII-5

Political Efficacy by Status Consistency

(% in each cell ranking high on efficacy)

		Position on Index of Socioeconomic Status	
		Lower	Middle or Upper
Evaluation of Social Class	Lower or Working	Consistent 43% (82)[a]	Inconsistent 30% (33)
	Middle or Upper	Inconsistent 29% (283)	Consistent 38% (439)

[a] Number of cases

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TABLE VII-6

Percentage of Advanced Students Ranking High on Political Efficacy by Status Consistency and Overall Facilitation

(% in each cell ranking high on political efficacy)

2nd Cycle

		Status Consistent	
		No	Yes
Overall Facilitation	High	44% (50)	54% (89)
	Low	29% (133)	38% (206)

[a] Number of cases on which percentage is based

status inconsistent subjects). We observe a similar but less striking pattern with the variable of political activism (see Appendix VII, Table VII-3). Table VII-6 further reveals that in the cycle of advanced studies, perceived obstacles which are probably an indication of future life chances, are exerting a greater influence on identification with political roles than status consistency.

"STRATIFICATION BY DESTINATION RATHER THAN BY ORIGIN"

This trend appears to accord with the frequently expressed postulate that social class backgrounds exert decreasing influence on university students' political convictions (see Lipset, 1968; Agger, Goldstein, and Pearl, 1961; Almond and Verba, 1965) as they become involved in the academic environments of their particular schools and more generally the cosmopolitan milieu of a university. Applying Turner's (1964) thesis to these advanced students in the University of Oriente we could say that stratification by future life chances ("destination") might be a better predictor of student behavior and orientations than stratification by social class background ("origin"). According to Turner, "whenever current activity is viewed as a preparation for a future which is more significant than the moment, it is the anticipated objective standing which determines social placement and self-conception" (p. 211).

Students from lower class backgrounds in the University of Oriente, as is evident from the data, become increasingly identified with the middle class status of professional and scientific occupations.[3] What then becomes important is the students' perception of the opportunity structure in the society. Even when opportunities may not appear to be encouraging, the very real commitment of these students to graduating and "getting ahead" may be enough to keep them actively involved in attempting to become competent professionals and effective citizens.

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[3] Goldsen et al. (1960), in a study of what United States college students think, report similar findings. They observe that "by the time a young man of working class origins has matriculated at a university and has committed himself to four years or more of higher education, he has undoubtedly largely taken on the values and the outlook of the future middle class professional he aspires to be" (p. 115).

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SUMMARY

In this chapter, we have attempted to argue the rival hypotheses that politics represents an area of substitute achievement for students frustrated in their commitment to obtaining a university degree or blocked in their ascent from lower class status to elevated positions in the society. Our data fail to substantiate these arguments. Neither perceived blockage within the university, nor status inconsistency in the larger society prove to be powerful predictors of student political activism.

Generally, the most politically involved and efficacious students are high in commitment and consistent in the images they have of their social status, while believing they are making progress toward desirable goals. By contrast, students blocked in their status aspirations tend to be less active. Frustration within the university and perception of unfavorable life chances appear to have the negative effect of lowering students' feelings of political competency, so that by the cycle of advanced study, many of these individuals no longer identify with a participant citizenship role.

Our data suggest that political and professional efficacy are two substantially associated variables which are based on successful training experiences within the university and the students' belief in a promising future. We thus can view involvement in politics as an optimistic expression of students' confidence in the possibility of social change in a turbulent, imperfect but nonetheless understandable and expanding social universe, which is subject to their influence.

CHAPTER VIII

THE EFFICACIOUS STUDENT AS MODERN MAN

In this chapter, we will elaborate the argument that a sense of subjective competence, whether expressed in the political-critic or professional-trainee role, tends to be highly associated with achievement norms, active involvement in the environment, and an optimistic outlook on future life chances. The optimism of efficacious students is anchored in definite images of the positions they will occupy in the industrial economy. By contrast, alienated individuals are characterized by both a lack of achievement norms and concreteness over their future place in the social order.

Efficacy emerges as a central factor in a constellation of closely interlocking attitudinal dispositions which characterize the "modern man" of Kahl (1968), Smith and Inkeles (1966), and the "cosmopolitan" of Stinchcombe (1968). We define efficacy as a distinguishing trait of the individual whose path is "chartered" from the university to an attractive future. We view the student's path as being "chartered," when specific connecting links exist between university training programs and desirable positions in the economy and society.

ACHIEVEMENT ORIENTATIONS

In Chapter V, we noted a strong association between achievement norms and political efficacy (also, see Appendix V, Tables V-1,2,3). It is possible that this relationship is determined by professional efficacy which is substantially associated with both achievement norms and political efficacy. We, therefore, look at the simultaneous effect of political and professional efficacy on our different measures of achievement orientation -- "Activism," "Integration with Relatives," and "Trust."

Activism

High scores on the "Activism Scale" of Kahl (1965) imply a rejection of a fatalistic view of life. Our modified scale consists of four items related to the value of planning for one's future as well as attempting to influence the environment (see Appendix I-5, for individual items).

We observe in Table VIII-1 that both political and professional efficacy are systematically associated with higher levels of activism. Seventy-nine per cent of the overall efficacious students rank high on activism, compared with only 13 per cent of the most alienated students.

Integration with Family

Politically and professionally efficacious students also are more willing to loosen their family ties in search of employment. Using a modified version of Kahl's "Integration with Relatives Scale," we note in Table VIII-2 that 71 per cent of the students ranking high on both dimensions of efficacy score high on independence (see Appendix I-7 for items constituting the scale).

However, as we suggested in Chapter V, this independence is not indicative of a general rejection of family nor rebellion against parents' political beliefs. Efficacious students report strong family support for their career choices. And as we observed in the earlier chapter, the politically efficacious report more frequently than the alienated that their families agree with their political viewpoints.[1]

Trust

Another important dimension of achievement orientation is a belief in the fundamental trustworthiness of human nature. According to Kahl (1965, p. 677), trust in people enables mobile individuals to develop long-term relationships that aid their careers, particularly in bureaucratic structures where judgments of peers are so crucial. Our findings show that both political and professional efficacy accompany high scores on Kahl's "Trust Scale" (see Table VIII-3).

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[1] In general, it should be noted that integration with family is a strong cultural value in Latin American society (see Gillin, 1961, pp. 33-34; Madsen, 1964, p. 17).

TABLE VIII-1

Three-Variable Table -- Percentage Ranking High on Activism Scale (Kahl) according to Political and Professional Efficacy

(% in each cell ranking high on activism)[a]

		Political Efficacy		
		Low	Intermediate	High
	High	39% (18)	57% (35)	79% (86)
Professional Efficacy	Intermediate	23% (60)	46% (206)	61% (149)
	Low	13% (68)	26% (127)	61% (64)

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[a] Forty-seven per cent of the students rank high on activism.

TABLE VIII-2

Three-Variable Table -- Percentage Ranking High on Independence from Family Ties (Kahl) according to Political and Professional Efficacy

(% in each cell ranking high on independence)[a]

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	50% (18)	57% (84)	71% (86)
	Intermediate	28% (60)	41% (208)	55% (149)
	Low	25% (67)	37% (127)	44% (63)

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[a] Forty-five per cent of the students rank high on independence.

TABLE VIII-3

Three-Variable Table -- Percentage Ranking Intermediate to High on Trust Scale (Kahl) according to Political and Professional Efficacy

(% in each cell ranking intermediate to high on trust)[a]

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	33% (64)	49% (148)	63% (84)
	Intermediate	26% (127)	47% (206)	60% (85)
	Low	43% (68)	26% (68)	47% (17)

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[a] Forty-five per cent of the students rank intermediate to high on trust.

Independent Effects of Types of Efficacy

Tables VIII-1 to VIII-3 permit us to view the independent as well as the cumulative association between our twin efficacies (professional and political) and achievement orientations. We observe that political efficacy is not only strongly associated with achievement norms, but accounts for the greatest variation in scores on the measures of activism and trust. Professional efficacy is the more powerful variable with regard to independence from family ties.

With the exception of the finding on trust, our results tend toward the obvious. Independence from family ties would appear to be a requisite for strong commitment to an occupational career. A strong subjective sense of political competence is highly associated with a broad range of involvement and activism in many areas.

Although trust may be an important correlate of occupational mobility, it is also fundamental to active participation in the political process. An insight into the relationship between trust and political efficacy is provided by the Levin (1960) study of political behavior in a major United States city; he found that "a large proportion of the electorate feels politically powerless because it believes that the community is controlled by a small group of powerful and selfish individuals who use public office for personal gain [and these] persons remain in control regardless of the outcome of elections" (p. 62).

THE EXPRESSION OF EFFICACY IN MODES OF POLITICAL PARTICIPATION AND PROFESSIONAL MILITANCY

Just as political efficacy is closely associated with achievement norms essential to occupational mobility, so is professional efficacy related to the possession of civic norms essential to the maintenance of a democratic regime. Moreover, a sense of efficacy in the professional realm also extends to more active modes of participation in the political area.

Role in Political Discussions

We asked students what role they play in political discussions. The fixed-alternative answers were: listening, occasionally expressing an opinion, taking an equal part, and usually attempting to convince others of the rightness of one's own political convictions. In Table

VIII-4, we observe that although political efficacy is strongly associated with taking an active part in political discussions (more than only listening), professional efficacy nonetheless has an independent effect. High professional efficacy, in particular, contributes to assuming an active role in discussions when students are intermediate or low on political efficacy.

Protesting Local Government Decisions

On a second item, we queried students on what they would do to protest a municipal ordinance they considered to be prejudicial to public interests. They could engage in the following actions: discuss the problem with their friends, send a petition, visit the municipal council in a group, protest through political party action, demonstrate in the streets, or do nothing.

High efficacy on either dimension is associated with doing more than just discussing the issue with friends. Students with a strong sense of professional efficacy are most likely to protest the ordinance by visiting the municipal council in a group. On the other hand, students high on political efficacy are more likely to consider working through a political party, in addition to employing a combination of tactics to protest.[2] (See Table VII-2B in Appendix VIII).

Professional Militancy

In a related area of activity we looked at the extent to which different types of efficacy influence professional militancy. Professional efficacy somewhat surprisingly does not have as strong an effect on willingness to militate against unfavorable working conditions as does political efficacy.[3] (See Table VIII-3 in Appendix VIII).

Resort to Violence and Disobedience

In general, efficacious students are less likely to espouse the use of violence or resort to disobedience when they are in disagreement

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[2,3] The direction of causality on these items is unmistakable, since feelings of efficacy are being projected into a hypothetical situation -- that is, protesting future work conditions or a harmful municipal ordinance.

TABLE VIII-4

Percentage Reporting They Take an Active Role in Political Discussions according to Political and Professional Efficacy

(% in each cell playing an active role)

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	56% (18)	67% (31)	78% (83)
	Intermediate	60% (58)	61% (205)	81% (145)
	Low	42% (66)	55% (123)	75% (61)

with the government (see Appendix VIII, Tables VIII-4,5). An interesting finding is that professional more than political efficacy is associated with a disavowal of civil disobedience. Perhaps as Dawson and Prewitt (1969, p. 178) suggest, the likelihood of occupying a prestigious status in the society leads some university students to acquire a stake in maintaining the existing institutional arrangements.

IMAGES OF FUTURE PROFESSIONAL ROLES

Subjectively competent students have clearer and more favorable images of their future positions in the economy than do alienated students. The higher students rank on the two dimensions of efficacy, the greater is the tendency to report that they have received adequate occupational information and believe they will encounter no major obstacles in obtaining work (Tables VIII-5 and VIII-6).

Essential differences do emerge in the career plans as well as institutional and geographical preferences of these students. Generally, students placing high on professional efficacy have clearer images of the types of professional tasks they will be called on to perform. They are highly mobile and in pursuit of whatever institutional arrangements will best support their professional advancement. By contrast, students with only a well developed sense of political efficacy have more definite preferences for a specific type of job within a specific institutional and geographical setting (see Appendix VIII, Table VIII-7).

EFFICACY AND MODERN MAN

Our efficacious student resembles the "modern man" of Smith and Inkeles (1966) and Kahl (1968). Smith and Inkeles, in a cross-national study of modernization in six countries, assumed that "modernity would emerge as a complex but coherent set of psychic dispositions manifested in general qualities such as a sense of efficacy, readiness for new experience, and interest in planning..." (p. 354). These general dispositions would be related to the individual's willingness to assume more specific roles -- for example, being an active citizen. The researchers report that their initial findings tend to confirm these assumptions cross-nationally in a striking manner.

Kahl (1968), in a parallel study of modernization in Brazil and Mexico, reaches these conclusions: "Thus the modern man, through the way

TABLE VIII-5

Percentage Reporting Occupational Information They Have Received Is Adequate according to Political and Professional Efficacy

(% in each cell receiving adequate information)

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	50% (18)	50% (82)	67% (86)
	Intermediate	32% (60)	44% (207)	44% (144)
	Low	28% (67)	31% (125)	34% (62)

TABLE VIII-6

Percentage Reporting they Anticipate No Serious Obstacle to Obtaining Desirable Job according to Political and Professional Efficacy

(% in each cell anticipate no serious obstacle)

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	22% (18)	23% (83)	35% (86)
	Intermediate	18% (145)	18% (203)	26% (56)
	Low	11% (63)	8% (120)	11% (66)

he perceives the world around him and its opportunities for himself, and through the way he chooses which paths to follow, is a man who seeks to control his life, plan his future, climb up a bit in the status hierarchy, and improve his material circumstances -- because these ends are desirable and also because they are seen as obtainable" (p. 133).

In our study of students at the University of Oriente in Venezuela, sociopsychological mobility appears to occur when the individual's path is "chartered" from the University to desired statuses in the society. The existence of opportunities and aspirations in themselves do not lead to the growth of the "modern man" or the efficacious individual. It is the establishment of a connection between opportunities and aspirations that creates conditions favorable to the development of a sense of personal control (see Chapters VI and VII).

This connection is made more tangible by successful anticipatory socialization into future professional roles. The nature of the larger society and the student's future position in it is also illuminated by active involvement in political roles.

SUMMARY

In this chapter we have demonstrated that professional and political efficacy are two distinct but interrelated variables. The politically efficacious student has concrete images of his future place in the industrial economy and is willing to militate to overcome structural obstacles that would bar his access to desired statuses. The professionally efficacious student tends to be supportive of democratic processes while he is prone to take action to redress political grievances. Students with a well developed sense of efficacy in both the political and professional areas are a potential force for innovation and change in the society.

We have assumed that manipulation by the student of his environment leads to more concrete images of the future. In the following chapter, our focus will shift to ways in which a university can interact with its environment to shape students' concepts of their future, thereby developing a belief in personal control over desired outcomes in specific areas.

CHAPTER IX

FURTHER NOTES ON THE CHARTER

According to Kahl (1968), "the typical 'modern man' seeks to control his life, plan his future, climb up a bit in the status hierarchy, and improve his material circumstances -- because these ends are desirable and also because they are seen as obtainable" (p. 133). In this chapter, we explore additional ways in which a new university, located in the backward region of a transitional society, can interact with and manipulate its environment to make the goals students seek appear to be within their grasp.

DIFFICULTIES IN ESTABLISHING A CHARTER

The leverage a university can exert over its students, in socializing them to professional roles and manipulating images of their futures, is greatly conditioned by their awareness of the social gains the school can hold out to them. In the case of the University of Oriente, its potential leverage would appear to be great. A university degree represents for many students in our sample a direct jump from their lower class origins to respected status in a society where college graduates still constitute a visible elite.

Yet, the University of Oriente is also limited in its effectiveness by many of the institutional features previously discussed: its newness as an institution, the relative isolation of the University, the lack of definition and clarity associated with technical and scientific careers in the society.[1] In these respects, the University is not unlike the average college in the United States which Meyer (1968) describes as trying to assume some larger power over the lives of its students without possessing a clear-cut social charter.

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[1] These limitations correspond partly to what Meyer (1968) terms a) the degree to which a school monopolizes entry into social elites and b) the directness of the publicly-understood association between the school and elite entry.

CREATION OF A MYTHICAL CHARTER

Where a socially validated charter does not exist for a university's products, it then becomes necessary for the school to construct one. To gain acceptance of its output, namely high-level manpower, the university must engage in a process of creating an interest in as well as educating certain sectors of the economy to the benefits that derive from employing skilled personnel. Where opportunities for attractive work do exist and are highly competitive, the university must impress upon the public the excellence of its graduates.

If the university is interested in holding out the promise of a more certain future to its students, it must endeavor to structure areas of the job market and paths of access to occupational roles. This type of social engineering and planning for the future is exceptionally important in a country such as Venezuela, where undirected social change is occurring at a rapid pace, and where we encounter the paradox of so many developing countries -- a putative need for high-level manpower which goes unsatisfied because of imperfect market mechanisms and the lack of governmental structures to implement demand.

Few departments within the University view their role within this broader perspective of doing more than just preparing their students adequately for whatever uncertain future may await them. However, within the last year or two there has been a growing awareness of the need for departments to give consideration to the eventual placement of their graduates, and there is an interesting case study of one department that has broken with this pattern of indifference -- the department of mathematics is actively planning to prepare a specialized cadre of technicians, while simultaneously undertaking programs to create a demand which will insure future employment.

Mathematics

The department is presently creating a new specialization in "applied mathematics." The specialization will focus on the use of computers in the scientific management of business and government as well as basic and action research on educational processes. On the basis of present trends in the utilization of computers in the country, the departmental head has estimated that by 1970, Venezuela will be the second-ranking country in the Americas in terms of the number of people with computer-related employment. The department envisages playing a central role in preparing program analysts as well as other specialized personnel in the use of computers.

Employment prospects of this kind being limited in the eastern region of the country, the department has undertaken a more ambitious program of involving national and international business firms in the program. For example, IBM and Fiat are working closely with the department in establishing what may very well become a regional center for the Americas in applied mathematics and computer sciences.[2]

Although these plans are largely on paper and may not materialize in the near future, the department has been rather successful to date in "constructing in the minds of its students a charter which is in fact not socially validated" (see Meyer, 1968, p. 25). By means of a selective recruitment policy and a supportive faculty environment, the department has inculcated an "elite spirit" and a high degree of confidence about the future among its students. The aura which pervades the mathematics department (as well as the physics department established in 1967) derives in part from the difficulty of the subject matter. Mathematics and physics are made even more formidable by professors who are attempting to elevate the status of their discipline.

Once a student has been accepted into either the mathematics or physics program he is likely to receive faculty encouragement for his choice. Students are repeatedly told that they represent the most select group in the sciences. Other rewards are provided through apprenticeship opportunities: approximately one-third (30 per cent) of the advanced students are employed as laboratory or teaching assistants. Grades, however, remain highly competitive.

On an item asking the students how satisfied they were in general with their academic experiences, the mathematics and physics students were clearly the most satisfied groups.[3] When queried about their futures, more than half the subjects in both mathematics and physics believe the probabilities of obtaining a desirable job are good -- more than any other department. They are also more confident than other students that the University will find them employment after graduation (48 per cent), and they tend to have clearer concepts of the specific tasks they will be called on to perform. (This result is not surprising, given the high percentage of these students engaged in professionally relevant tasks.)

This general optimism may be only illusory and eventually have a negative effect should aspirations remain unfulfilled. However, what the mathematics department is doing appears to offer an alternative to the University being more than a reflection of the traditional ills of an underdeveloped country. The attempt to break from the impasse, where the University trains people that only it can employ, is being undertaken to a lesser extent by other departments.

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[2] In January of 1969, the department initiated the first doctoral (Ph.D.) program in mathematics in Latin America.

[3] Sixty-four per cent of the mathematics and physics students are generally satisfied with their departments, compared with a department such as agricultural engineering, where only 44 per cent are contented.

Biology

Biology represents an interesting case of a department that is moving toward a recognition of the problems that confront their future graduates. Although a majority of biology students prefer careers in basic and applied research, there are only a handful of institutions that can offer this type of employment. For example, many are interested in working for the national institute of scientific research located in the outskirts of Caracas (Instituto Venezolano de Investigaciones Científicas), where opportunities are severely limited.

Until now, the University has been able to absorb the majority of biology graduates within their own department as well as in the Oceanography Institute in Cumaná and the School of Medicine in Ciudad Bolívar.[4] It is unlikely that the University will be able to continue assimilating such a high proportion of its own graduates indefinitely.

Recently, the chairman of the department has begun to establish contacts with national industries which conceivably could serve as sources of employment (such as the food-processing industries). Another professor is attempting to arrange industrial visits for his students to better acquaint them with the range of work open to biology graduates. These visits are somewhat problematic, given the low level of industrialization of the Cumaná area -- the majority of industries relevant to biology students are located in the central and western regions of the country.

The situation of biology students is somewhat comparable to that of animal husbandry. By the cycle of professional studies, there is a slight increase in the percentage of students reporting that the occupational information they receive is adequate; student evaluations of job opportunities also appear to become more realistic. One-third of the students in "Cursos Básicos" who are preparing to study biology believe their chances of finding desirable employment to be good; among advanced students, only 22 per cent evaluate their prospects as being good, with 50 per cent considering opportunities as fair. Another one-fourth of the advanced students are uncertain about the job market.

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[4] A situation which has not pleased medical students. They resent recently graduated "licenciados" in biology teaching preclinical science courses.

TRENDS IN VOCATIONAL PLACEMENT

It is interesting to note that in the cases of mathematics and biology, department chairmen take the initiative in seeking vocational information and endeavoring to place graduates. The Orientation Service, as presently constituted, offers primarily academic counselling. Only recently has it begun a follow-up study of graduates to determine where they are working. Eventually a placement service may arise. Until then, the initiative resides with ambitious chairmen and the University Planning Office.

"Pasantías" as a Way of Placing Students

One of the principal mechanisms through which a department can better acquaint students with important features of their profession, as well as facilitate the placement of graduates, is through arranging vacation-time jobs with nearby industries. In Chapter III, we briefly mentioned these vacation jobs or internships, "pasantías," as offering important training experiences for advanced students. These jobs have short-term pragmatic benefits, including good pay in some industries and an opportunity to gather data for the senior year thesis. Even more important may be the long-term association between student and company which grows out of the internship.

In the case of natural resources engineering (particularly mining and geology) the work sites for the "pasantías" are a primary source of employment. The principal mines in Venezuela and the largest unexplored area for natural resources are at the footsteps of the University campus in Ciudad Bolívar. With regard to petroleum engineering, several major foreign oil companies are located in the same city as the Technological Institute or within two hours driving distance of Puerto La Cruz.

The engineering departments maintain active ties with the companies and government agencies and are instrumental in arranging "pasantías." Almost all of the advanced students in natural resources engineering have been involved in one or more of these work programs, and it is not uncommon for the same students to be employed by these companies after graduation. The prevalence of internship experiences and specific connecting links between training programs and future employment may be an important variable explaining the interesting phenomenon that the highest percentage of professionally efficacious students are found in these fields (see Table II-16).

Engineering students, in other specializations, must travel greater distances to find relevant work experiences. Two sources of future employment for mechanical, electrical, and chemical engineering students will be the industrial complex arising in the Guayana Region, some two hundred and fifty miles to the southeast of Cumaná, and the petrochemical industry developing in the central western region. In general, engineering students are more favorably situated than students in basic sciences or applied fields, such as administration, with regard to the availability of internship opportunities -- as they are in terms of overall employability.

Locating Campuses Near Sources of Employment

By locating the principal campus of the University of Oriente in Cumaná, its founders envisaged the school having a socioeconomic impact on the hitherto isolated city. Economic benefits were to accrue to the city through employment offered by the University to a variety of people engaged as secretaries, maintenance personnel, etc. Expenditures by the University would be a principal economic input to the commercial sector of the city.

Undoubtedly, the University has had a beneficial impact on the city. From a negative point of view, the principal drawback in placing the general studies program and regional headquarters in Cumaná has been the absence of a surrounding infrastructure or industrial complex to absorb the output of the University. The magnitude of this problem will grow, unless the University can integrate its future expansion plans with those of national and regional planning boards, concerned with the development of Oriente.

Planning

An Office of Planning was established in Puerto La Cruz in 1964, and has since expanded to address itself to the types of problems specified above. One of the major expansion programs it has recommended is to develop "Cursos Básicos" on other campuses, lessening demand on Cumaná by providing opportunities for increasing numbers of students to attend the University near their homes.[5] One principal objective was to increase the number of students who would eventually enter the second cycle of professional studies and justify certain technical careers being offered (mining and geological engineering as two patent examples), which until now have been extremely costly due to the small number of students they attract. From our point of view, it will be interesting to observe if one consequence of locating a basic studies program in Ciudad Bolívar (some fifty miles to the west of the Ciudad Guayana industrial complex) will in any way affect career decisions.

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[5] In January of 1969 basic studies programs were initiated in Ciudad Bolívar and on the island of Margarita.

Ciudad Guayana, at the confluence of the Orinoco and Caroní Rivers, is one of the most rapidly growing and industrializing areas in Latin America. The existence of a source of employment for technical personnel so close to the Ciudad Bolívar campus may have a marked impact on the vocational orientations of the students and their future integration into the industrial economy of Venezuela. A study conducted by Gouveia (1966) in São Paulo, Brazil shows that where a reservoir of positions is immediate and salient, we encounter the interesting phenomenon of middle class and upper middle class students entering industrial secondary schools (see Burnett, 1967, pp. 16-17, for a review of social science research on vocational attitudes of different school populations in Latin America).

Our data reveal that students are basically social maximizers in their vocational decisions -- they choose the most salient and prestigious careers available to them. Our findings further suggest that a principal task of the University of Oriente necessarily will be to make new career lines increasingly visible and attractive to the students.

One way of structuring paths of access to key positions within an expanding economy (as suggested by mathematics) is through closer cooperation with industry. A parallel example for the University of Oriente is the recently established polytechnic institute in the city of Barquisimeto, located in the central west region. The Instituto Politécnico has established an advisory board of representatives from local industry which will provide the school with vital information concerning areas of expansion and help plan the type of curricula and training experiences which will lead to future employment.

In the case of the University of Oriente, the Planning Office is cooperating closely with a regional development agency (Nororiente) which has just completed a manpower study of the eastern region and will have credit funds available to induce industry to settle in the area. The University will then play a crucial role in preparing students for the new positions which will become available.

SUMMARY

In this chapter we have explored some of the ways in which the University of Oriente can channel students toward positions in the industrial economy of Venezuela. In particular, we examined the novel approach of the mathematics department which has attempted to create a demand for its future graduates in a new field of specialization. To overcome problems of a lack of information concerning job opportunities, poorly defined paths of access to existing positions, and a general paucity of jobs available to highly trained manpower in the northeastern region, we suggested closer contacts between the University and existing industries as well as coordination of future expansion plans of the institution with regional development plans.

Within a broader perspective, we assume that a university is more than a product of historical conditions prevailing in a society -- it is also an active agent of change. We look at the University of Oriente, a new institution of higher learning in a backward region of Venezuela, as interacting with its environment to purposely change it. Manipulating students' images of their future roles in the society involves more than constructing the myth of a social charter where none may exist; the University very realistically must stimulate the development of industry and public services in the area, providing jobs and opportunities for self-fulfillment that otherwise may not materialize.

CHAPTER X

CONCLUDING SUMMARY

Latin American universities confront the problem of channeling students toward specific occupational and political roles central to development. An experimental university in Venezuela, Universidad de Oriente, was selected for an explanatory study of the ways in which institutional features of a school -- for example, patterns of student-faculty interaction, reward systems, and connections to sources of employment -- influence eventual student integration into the society. Our principal research focus was to study the impact of a university social structure on student perceptions of their efficacy in anticipatory professional and political roles.

The main source of survey data on student attitudes, opinions, and background characteristics has been a self-administered paper and pencil questionnaire developed in the field. The questionnaire was applied to a sample of nearly 900 students in nineteen fields of specialization on the four regional campuses of the University of Oriente. Supplementary information was gathered from a variety of sources: university files and publications; previous research conducted at the institution; and taped interviews with graduating students.

PRINCIPAL FINDINGS

Preparation for Occupational Roles

1) *Successful and satisfactory training experiences within the University are positively associated with a strong sense of professional efficacy* (Chapter III). Students who interact with significant and rewarding professors and engage in professionally relevant tasks tend to have positive evaluations of their competency to perform future occupational roles.

2) Institutionalized prestige of a field is substantially associated with a feeling of professional efficacy (Chapter III). Students in the high prestige fields of medicine and engineering generally express more positive evaluations of their professional competency than do students in the less prestigious departments of sociology, animal husbandry, and biology. Students who believe their academic specialization to be prestigious tend to rank high on professional efficacy, even though they may be located in low prestige fields.

3) Institutionalized prestige of a field is negatively correlated with student-teacher interaction and satisfaction with reward systems (Chapters III and IV). The higher the prestige of a field the more dissatisfied students are with different aspects of their academic environment: grades are highly competitive and teachers are more distant. By contrast, low prestige fields are supportive of students: good grades are more readily obtainable, teachers are accessible and encouraging. Because of this negative correlation, there is no department within the University of Oriente that is both highly supportive and prestigious.

4) Internal reward systems and student-teacher interaction patterns are greatly conditioned by the University's standing in the society and by future status different departments can offer (Chapter IV; see Meyer, 1968). Students in less prestigious fields are satisfied within the supportive environments of their departments but uncertain as to what future awaits them outside the University; students in the more prestigious fields are dissatisfied with their academic environments, but look forward with confidence to the attainment of esteemed statuses within Venezuelan society. In general, the socializing impact of the University of Oriente would appear to be limited by its newness as an institution and by its location in the relatively backward eastern region.

University Training Experiences and Political Involvement

The above findings summarize the principal factors in the university training experience that appear to be associated with successful integration into occupational roles. Our second area of research concerns those institutional features of the university which affect the integration of students into the political realm, and the relationship between student occupational and political role orientations.

5) A sense of competency developed in the professional realm is positively associated with students' concepts of themselves as political actors (Chapters VI and VIII). Professional and political efficacy are two independent but substantially interrelated variables, characterizing

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the individual who interacts with and manipulates his environment, is strongly achievement oriented, and secure in his images of the future.

6) *The politically competent student is likely to be a more active and democratic citizen* (Chapter V). Although students at the University of Oriente are generally interested in politics, intense involvement with political roles is more typical of the efficacious student. He believes in the possibility of social change and is willing to agitate for reforms at the national and local levels as well as in the occupational realm. However, his militancy may be narrowly sectarian and have disruptive consequences for the academic sphere.

7) *Intense involvement in the political realm is associated with expressions of confidence and optimism* (Chapters VI through VIII). Contrary to the popular conception of the student activist, he is not significantly dissatisfied with his academic environment; nor does he tend to be found in poorly defined career patterns that lead to uncertain futures, as some research suggests. The student who is getting ahead, and perceives a more promising future which may be blocked by imperfections in the society, takes action. The student who perceives failure and is blocked in his mobility aspirations tends to withdraw from the political arena. The alienated student is passive, fatalistic, and prone to violence.

SIGNIFICANCE OF FINDINGS

Our data reveal efficacy to be a general attitudinal disposition, which is expressed differently in the political and professional realms. It is substantially correlated with a constellation of attitudes which typify the "modern man," who according to Kahl (1968), "seeks to control his life, plan his future, climb up a bit in the status hierarchy, and improve his material conditions -- because these ends are desirable and also they are seen as obtainable" (p. 133).

These ends are seen as obtainable and student efficacy is strongest where the university has been successful in establishing a "charter" or connecting links between training experiences and desired statuses. We, therefore, view efficacy as more than a belief in personal control and a feeling of power over the events that occur in one's life; efficacy becomes primarily a measure of the student's anticipated integration into the industrial economy and political system.

By contrast, alienation is more than a feeling of powerlessness; it is a lack of integration into the society or, as Levin (1960) has suggested, "the belief that he [the individual] is not able to fulfill what he believes is his rightful role in society" (p. 59). The syndrome characterizing the alienated student is classic: powerlessness, estrangement, meaninglessness, and normlessness.

Integration into occupational and political roles presumes that these roles are identifiable and have meaning for the student. In the case of university students in a transitional society such as Venezuela, the immediacy and reality of the political realm may be greater than an emerging industrial economy, whose configurations are not clearly discernible. As Slote (1967) observes: "The intensity of the political statement in Venezuela cannot be overstressed" (p. 307).

Students in Venezuela have direct contact with political roles from a relatively young age. From high school on, the student is likely to have engaged in some form of protest activity, participated in school elections where student tickets represent national political parties, and played a role in the campaign activities of a political party during an election year.

Secondary and university students were instrumental in the past in opposing dictatorial regimes, and are still expected to be articulate critics of government programs -- or lack of them. Students tend to have a diffuse sense of political competence, regardless of specific institutional features of a university.

Anticipatory socialization into professional roles, however, is not characterized by the same degree of concreteness as is the case with induction into political roles. Too few students have had direct contact with and involvement in a relevant occupational role prior to graduation. The connection between training experiences within the university and future positions in the economy is not always clear. Technical and scientific careers in transitional societies are usually poorly defined with limited opportunities for professional advancement. Ascriptive forces or inconsistencies in the market may bar access to desirable positions.

The greatest challenge to the University of Oriente is to integrate students into the occupational world. We have shown that through planning and innovative actions, such as in the mathematics department, the University can interact with the environment to structure opportunities and channel students to occupational roles for which they have been prepared.

RECOMMENDATIONS FOR FUTURE STUDY

It is hoped that other studies at the University will build on and further validate the findings of the present research. Our study consisted of a cross-section of the student population; it did not include other relevant populations such as graduates and non-university youth. A cross-sectional study is limited to "snapshots" of different people at different locations at the same points in time. Ideally, as Lerner (1967, p. 330) suggests, we would prefer to have "observatories" -- or long-range observations of individuals as they progress through an environment.

Follow-Up Studies of Graduates

The University presently has little information on the subsequent experiences of its graduates. We, therefore, have a series of unanswered questions: What frustrations do they encounter in looking for a job? What factors are important -- achievement or ascriptive criteria -- in finding a desirable position? Does a sense of professional efficacy develop on the job? Do political attitudes change according to the nature of the job -- for example, its position in a hierarchy of occupational prestige or the structure of the tasks the individual performs? (See Scott, 1969).

Exits

At the same time we are interested in pursuing what happens to students who drop out of the University. A central question would be whether these students suffer a loss of self-esteem. Although our data suggest that blocked mobility leads to withdrawal in the social-psychological sense of the word, we also know that alienated individuals are prone to violence and civil disobedience. We, therefore, would like to examine the extent to which these students have become radicalized or under what conditions they could be mobilized for extremist political activity.

Non-Entrants

How much effect does the university have on political attitudes of students, compared with secondary school graduates who do not continue with their schooling? In an Argentinean study, Nasatir (1966b, p. 281) suggests that it is even possible for political interests among older students to be less intense than would have been expected had they not entered the university.

The University of Oriente has scant information on characteristics of non-university youth; yet such information is essential to its expansion plans. Do the value orientations of these youths differ from those of matriculated students, or are they barred from further education by economic necessities? What are the possibilities of the University reaching these individuals by providing different levels of education appropriate to their interests and the development requirements of the region? For example, would these students be attracted to middle-level technical courses?

Entrance-to-Graduation (Longitudinal Studies)

A promising line of inquiry would be to study specific changes which occur over time in academic fields which vary considerably in the status they can confer on graduates (differently "chartered" fields) as well as in student-teacher interaction patterns and internal reward systems. For example, students entering the premedical program usually have concrete images of the status that awaits them; we also know that many medical students become increasingly dissatisfied with their academic environments, if not disillusioned with the profession. What particular experiences affect their commitments or impel these students toward other academic fields?

Simultaneously, we would select a poorly chartered field, such as mathematics or biology, and study how the department sets out to gain acceptance for its graduates, and what effect these endeavors had on students' sense of professional efficacy over time. A longitudinal study of this type is now in progress (Mudra, 1969).

Along these same lines, the commitments of students who change fields within the University is a matter of great interest. Over 100 students transferred into administration from engineering and other science fields in 1968, because of academic difficulties. Do these students eventually develop a commitment to their profession or does their central objective remain a university degree, no matter what the specialty?

Students also transfer from other universities to Oriente. Many of the students who come to the University of Oriente from universities in other regions are looking for a soft option; in this respect they are similar to students who transfer from engineering to administration within the University. The changing commitments of these students also is worthy of study, as is the future of students who leave Oriente for other institutions of higher education.

PROGRAMMATIC CONSIDERATIONS

A cumulative body of research in these areas would assist the University of Oriente in its efforts to socialize students to changing occupational and political roles. Certain programmatic recommendations would appear to flow from our present research and merit further consideration on the part of University authorities.

Several recommendations relevant to the objectives of our study would be:

1) To attract students to newer technical and scientific careers, it is necessary to offer incentives at various levels, including secondary school, and also establish connections between training programs and desirable positions in the economy.

2) To sustain the motivation of students in prestigious fields, lessen competitive conditions or increase status of students earlier.

3) To have a greater impact on civic attitudes, the University could provide opportunities for students to participate on a more continuous basis in development programs in the eastern region. Internship experiences, for example, with regional planning offices, community development organizations, literacy and public health campaigns could be included in the curriculum as an integral, if not required, component of degree programs.

GENERALIZABILITY

Do our findings apply to student populations in other Venezuelan and Latin American universities? We selected for case study an experimental university in an impoverished region of Venezuela; its students, unlike those of metropolitan universities, are predominantly from lower class origins. The University of Oriente has served as a laboratory, in which we have isolated several surprising relationships among variables that may not obtain in other settings. We observed, for example, the negative correlation between departmental prestige and student satisfaction with their academic environments. We found that intense political involvement is related to achievement norms in the professional area and an optimistic belief in future life chances.

Although the research emphases of the study and the nature of the student sample circumscribe the generalizability of our findings, there are reasons for viewing limitations in a constructive way. Knowing the boundaries of the study, we can define more specifically its contribution to other research efforts. Our research plan was to study the impact of different departmental contexts within a university on student identification with and commitment to professional and political roles. This type of institutional study complements broader national and cross-national studies. Ideally, we would like to have a sufficiently broad range of studies within and across institutions, which would permit us to identify the individual and cumulative effects of specific academic contexts as well as general university and societal conditions on the student's eventual integration into adult roles.

To expand the scope of our findings would require comparisons not only with other universities in Venezuela but throughout Latin America, where we would find a more complete range of institutions varying on such important parameters as organization of curriculum, location, composition of the student body, but differing on our independent variables of faculty prestige, student-teacher interaction patterns, internal reward systems, opportunities to engage in professionally relevant tasks, and connections between training programs and sources of employment (see Lipset, 1966, p. 153). Such testing will be feasible, as a body of data is being amassed under the direction of Lipset on student values, vocations, and political orientations in universities throughout Latin America as well as other geographical regions. Rough comparisons of our data with previous research by Glazer (1965) and Williamson (1964), as well as by the Center for Development Studies at the Universidad Central in Venezuela (see Hamilton, 1968), show a high degree of similarity between certain findings.

The stage of economic and political development of a country greatly conditions the extent to which the university experience influences the student's professional and political role orientations. Walker (1967), in his comparative study of political socialization in Latin American universities, reaches the conclusion that "the consequences of political activity for political socialization depend upon the characteristics of the environment so that political activity appears to enhance acceptance of the norms and commitment to the values of a democratic culture only where such a culture exists both in the university and the larger society" (p. 428).

An important factor in our study is the present situation in Venezuela -- its rapid rate of social mobilization and the relatively high degree of openness and responsiveness of the political system to societal demands during the last decade. Our research suggests that student involvement in politics and feelings of efficacy are expressions of optimism as well as commitment to social change.

Under what conditions do awareness of societal problems and feelings of efficacy erupt into radical movements directed toward changing social structures? Goldrich (1965, p. 371) has identified the variable of "radical efficacy" as a mode of politicization rarely studied but critically important in political change. "The radically efficacious have confidence in their ability to do 'great things' and bring about major changes...." He observes that radical efficacy seems to occur among relatively advantaged people who experience frustration (also see Bwy, 1968).

We find radical efficacy also occurs when relatively disadvantaged groups experience opportunity for the first time, but perceive very real obstacles. Our findings would appear to be applicable to black militants in certain cases (Caplan and Paige, 1968) as well as to long suppressed groups in other countries which find themselves in a position to move ahead and effect changes in the social structure. Whether groups -- such as lower class students who attain a university level education -- attempt to destroy the social structure which they perceive as unjust or attempt to improve it would appear to depend on the degree of openness of the society to change and opportunities for advancement (see Pinner, 1968).

CONTRIBUTION

In a review of literature and research on Latin American universities, the researcher noted that an important step toward theory building would be a series of descriptive and analytic case studies at the micro-level, complementing broader international surveys and providing insights into specific conditions which influence student behavior (Arnove, 1967, p. 54). Stress was placed on the need for determining what variables within the educational experience of the student influence his political and professional orientations, and what consistencies -- or inconsistencies -- in the socialization process occurring during the university years are critical determinants of the student's future success in adult roles.

It is hoped that the present research -- an explanatory case study of an experimental university -- will have both pragmatic and scientific value. The research will have immediate and practical value in providing the University of Oriente with information that will enable it to better understand how certain institutional conditions influence student motivation and determine commitment to important educational goals. At the same time, the study is intended to contribute to a growing body of theory on how distinctive structural arrangements influence the socialization process for adult roles and, in particular, an individual's belief in personal control over his destiny.

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APPENDIX I

RESEARCH METHODOLOGY

This appendix reviews the principal procedures and decisions involved in various phases of the research: construction of a questionnaire with Likert-type scales; selection of a sample and administration of a questionnaire to approximately 900 students on four regional campuses of the University of Oriente; and quantification and analysis of survey data. Since these activities were conducted in the field under favorable but less than ideal conditions, it is first necessary to describe the background and context of the study before the value of the data can be assessed.

BACKGROUND AND CONTEXT OF THE STUDY

In the methodological appendix to his doctoral dissertation on university students in Chile, Glazer (1965) notes that too often chapters dealing with methodology simply emphasize the technical aspects of sociological research: "Successful research goes beyond good theory and technique and extends into the far more sensitive areas of cultural and personal relations. This is especially true in those countries, and in those situations, in which strong feelings of anti-Americanism are present. The investigator must overcome suspicions based on the factor of nationality before he can hope to obtain the cooperation and understanding so essential to his project" (p. 331).

In addition to suspicion directed toward a foreign researcher both by faculty and students on the basis of his nationality, there are other grounds for distrust. University officials may be reluctant to open their institution to research for fear that defects and shortcomings will be made public. A foreign observer may not be understanding of the problems confronting the university or impose foreign standards that are not adaptable to the host country situation. A new institution such as the University of Oriente is especially vulnerable to criticism: the early years of institution building everywhere are characterized by heroic efforts and continual crises.

Students may be suspicious of anyone, foreign or national, who is associated with the University power structure. The University of

Oriente is basically a creation of the Acción Democrática regimes, governing Venezuela from 1958 to 1969. It is an experimental university, not a national autonomous university, and does not fall under the protection of the 1958 Law of Universities. The governing boards of the national autonomous universities are elected by an assembly of faculty, student, and alumni representatives. The principal administrative officers of the University of Oriente (the Rector, two vice-Rectors, and a Secretary General) are designated by the Minister of Education. Students consider the University's administration to be too closely allied with the government, which they have traditionally opposed.

For a North American researcher to ask political questions of students is to immediately provoke suspicion of CIA and FBI involvement in the study. Although their fears are exaggerated, there are also justifiable grounds for such suspicion as witnessed by Project Camelot (see Horowitz, 1967).

As an election year in Venezuela, 1968 was a time of tension. The party in power, Acción Democrática, had splintered into two warring factions late in 1967. Fearing that the extreme left would take advantage of the crisis, the military as well as the political security branch of the police took a strong stance by jailing known sympathizers of the guerrilla groups. At times their measures appeared excessive and unnecessary.

The president of the student body on the Cumaná campus, where our office was located, was arrested and held incommunicado for over a week at an antiguerrilla camp in the nearby State of Monagas. Two coeds in Cumaná were arrested, detained overnight, and released before a massive student protest strike crystallized. A very tangible threat existed of punitive measures being taken against students who were too openly critical of the government.

To conduct research on student political orientations, under these conditions, would normally present difficulties. Establishing an atmosphere of trust and confidence also would require considerable time and understanding on the part of the foreign researcher. These considerations were of foremost importance in selecting the University of Oriente. The uniqueness of the University as an interesting case for study was but one major factor. Equally important was the researcher's five-year acquaintance with the University of Oriente. As a Peace Corps Volunteer with the University in Ciudad Bolívar between 1962 and 1964, he taught English to university students as well as secondary school students in the city's academic high schools, technical and commercial schools.[1]

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[1] The University of Oriente-Peace Corps Project, consisting of five Volunteer teachers, had high visibility as the first Peace Corps group in Venezuela, and the first university project in Latin America.

Later, in 1965-1966 he worked as a Ford Foundation-University of New Mexico Intern in the Planning Office (Eduplan) of the Ministry of Education and the national teachers college (Instituto Pedagógico) in Caracas. On two occasions he was invited by the University of Oriente to visit the Cumaná campus to assist the work of a newly established evaluation office.

At that time the researcher discussed the possibility of doing a dissertation on the University of Oriente with the Rector, Dr. Luis Manuel Peñalver, a distinguished Venezuelan educator. Although there were certain disadvantages in opening the institution to a study of this nature, Dr. Peñalver looked primarily at several benefits to be gained: 1) the University was interested in conducting research and the survey would offer a valuable training experience for students as well as teachers; and 2) data from the study would provide insights and additional information to assist the University Planning Office in its institutional evaluation and proposals for curricular reform.

The researcher was not alone in approaching the Rector on the matter of support for a doctoral dissertation on the University. Another intern with the Ford Foundation-University of New Mexico program, a doctoral candidate from Syracuse University, had been working in the Planning Office of the University of Oriente. His proposal was to study the University administration.

Arrangements were made in 1966 for the two researchers to return to Venezuela after completing their graduate studies at Stanford and Syracuse. Research on the dissertation was to form an integral part of the work of the Office of Evaluation in Cumaná. Association with a technical office of the University, we hoped, would impart an element of neutrality to the research project, thereby facilitating its acceptance by students and professors. At the same time the support of the Office of the Rector insured the cooperation of different offices of the University administration.

The researcher arrived with his family in Cumaná in early October, 1967. By the end of the first week, the researcher's family was settled in a residence not far from the University in the San Luis beach area. Within a fortnight, a make-shift office was provided in the marine biology laboratory of the Oceanography Institute, which served the researcher admirably in the initial stages of the research. The essential requirement was privacy to conduct pilot interviews.

One of the first tasks was to obtain the services of an advanced sociology student to assist in the various aspects of the research. The researcher knew several students on the Cumaná campus and hoped to use the assistant to acquaint himself with the student population in general.

The first sociology student (A)[2] to be interviewed for the position was a former acquaintance from Ciudad Bolívar. The student had been a youth leader in the Christian Democratic Party (COPEI) in another university, and since had withdrawn from more active involvement in politics to concentrate on his studies. He still maintained excellent relations with student leaders in the party and was instrumental in gaining their acceptance for the study. In general, he was exceptionally knowledgeable on university and national politics and had a wide range of friendships.

The principal political group on campus was a youth wing of the Communist Party which controlled the student center. If the study was to proceed without opposition, it was essential to win their support. A formal meeting with the student body president was to be arranged by the research assistant (A), but never materialized.

The meeting eventually took place informally in a University corridor -- when the researcher recognized a former high school student (B) who had been a frequent visitor to his residence in Ciudad Bolívar, in 1962-1964. The discussion which took place was informal, but the student body president promised his support. Throughout the school year, the researcher met frequently for lunch with this student leader to discuss the research project as well as the general political situation in the country.

Eventually seven advanced sociology students worked on the research project.[3] They were selected not only for their research promise, but for their leadership potential. An attempt was made to select from among the prospective candidates a representative of every major political faction, including independents. These students were very helpful in establishing good relations with the student population. They also were indispensable to the stages of constructing and applying the questionnaire, and quantifying the data.

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[2] In order to distinguish the principal student contacts in the study, we shall refer to them by letters.

[3] The students were on work scholarships from the Office of Student Affairs. The scholarships paid 300 bolívares (approximately U.S. $66.00) monthly for twelve hours of work a week. Generally, these scholarships are awarded on the basis of economic need and academic performance, with a grade point average of 6.5 out of 10 possible points being a minimal requirement.

CONSTRUCTION OF SURVEY INSTRUMENT

The construction of a survey instrument with attitude scales and the quantification of questionnaire data were largely technical matters which proceeded with relatively few difficulties. However, the selection of a sample representative of subjects in the different departments of the University, and the administration of the questionnaire during a period of student tension posed serious problems which extended beyond technical considerations into areas of personal and political relations.

The construction of a questionnaire to be applied to students at the University of Oriente, involved the following steps: 1) an initial period of pilot interviewing to test items from previous survey instruments and probe relevant areas, 2) a pretest applied to 140 incoming students in December of 1967, 3) analysis of data from the pretest to determine the internal consistency of items constituting attitude scales, 4) final selection of items, 5) revision and editing of the Spanish version of the survey instrument as well as the English translation.

Pilot Interviewing

Exploratory Stage of Semi-Structured Interviews

In the month of November 1967, two- and three-day visits were made to the University's regional campuses in Puerto La Cruz, Jusepín, and Ciudad Bolívar in order to conduct interviews with advanced students. Interviews were of a semi-structured nature, testing items from previous questionnaires applied in Latin America. Among these questionnaires were those of Lipset (1964), Glazer (1965), Finifter and Finifter (1964). Since the interviews were primarily with graduating students, discussion centered on prospects of finding employment as well as the professional preparation these students had received at the University of Oriente and factors which had influenced their choice of a career. Altogether thirty, one-hour-long interviews were conducted, twenty-six of which were taped.

Some twenty-five of these students were among the eighty-eight students who graduated from the University in February of 1968. These same students represented more than half the graduating students in the various engineering specialties offered by the University (agricultural, chemical, electrical, geological, and petroleum engineering).

Structured Interviews

Tapes of the interviews were analyzed and a pilot questionnaire was constructed in the second-half of November. Structured interviews were then conducted with fifteen students to test questionnaire items. These students were part of a systematic sample of thirty students previously selected by the researcher to rate the prestige of the different professional and technical careers offered by the University.

Pretest

During the second week of December, 1967, a pretest was administered to four randomly selected sections of 140 incoming male and female students. Altogether some 1,500 students were on campus for a one-month period of orientation and introductory classes, prior to beginning regular classes in January of 1968. Two student assistants helped in the administration of the questionnaire and answered questions that arose during the pretest.

The content of the questionnaire consisted of items pertaining to the socioeconomic and educational backgrounds of the students; interpretations and evaluations of future work, student activities and interests; and assessments of university student and national politics. A final section consisted of several pools of items that were to eventually constitute the Likert-type attitude scales. The scales consist of the following: a) a "University Integration Scale" to test an individual's subjective sense of efficacy toward making reforms within the university and influencing university authorities; b) a "Political Efficacy Scale," based on the research of Campbell, Gurin, and Miller (1954) and Easton and Dennis (1967); c) a "Professional Efficacy Scale" designed by the researcher to test students' feelings of competency concerning the performance of future occupational roles; d) the "Activism," "Trust," and "Integration with Relatives" scales of Kahl (1965) designed to measure achievement orientation.

Analysis of Pretest Data

Analysis of the pretest data focused principally on the clusters of items that were to form the attitude scales. Two types of reliability checks were used to determine the equivalence or internal consistency of items constituting the scales. Item discrimination analysis of the type described by Selltiz et al. (1964, pp. 184-86) and Green (1954, pp. 351-52) was undertaken to test if items distinguished between upper and lower scoring groups (see appended tables for differences in mean scores of upper and lower ranking groups on attitude scale items). The second mode of analysis involved intercorrelating items within and across scales; contingency tables were constructed, and chi square and phi coefficients were computed as indicators of the existence and strength of association between variables (see Mueller and Schuessler, 1961, pp. 251-69, on the use of these statistics). The item-by-item correlations for the different scales are presented in the tables appended to this chapter.

Final Selection of Items Forming Attitude Scales

The "Professional Efficacy Scale" was developed at the University of Oriente from a pool of fourteen items based on pilot interviews. The five items that were retained proved to have the greatest internal consistency. Items were eliminated on several grounds: a) when more than 85 per cent of the students answered a question in one direction, b) when the phi coefficient (ϕ) and the chi-square test (X^2) indicated no significant association at the .05 level, or c) when items within a scale had reverse or negative correlations. (The items forming the scale are seen in the intercorrelation matrix, Appendix I-4C).

The "Political Efficacy Scale" consists of three of the five original items constructed by Campbell, Gurin, Miller (1954); modifications are noted in Appendix I-8. One item found to be ambiguous by the researchers -- "The way people vote is the main thing that decides how things are run in this country." -- was changed to "Voting is an effective way to influence the political process of the country." A question referring to the expectation of being able to influence the political process through the subject's activities was added. Of the six items in the pool, five were selected. The sixth item which referred to the individual influencing the political process through his vote was found to be inconsistently or insignificantly related to the other items.

The "University Integration Scale" attempts to measure the same dimensions as the "Political Efficacy Scale" -- a) the expectation that an individual can influence significant others, b) the expectation that significant others will be responsive to the individual, c) a belief that legal means are open to one to influence authorities and that they are comprehensible or manageable, and d) either a sense of fatalism or activism toward changing events, processes, etc. All five items in the original cluster were retained (see appended Table I-4D).

Although the same dimensions are covered within the "Political Efficacy" and "University Integration" scales, intercorrelation of items showed them to be basically independent measurements. Similarly, intercorrelation of items between the other scales demonstrated the same independence.

Revision, Editing, and Translation of Questionnaire

Spanish Version

The Spanish version of the questionnaire was developed with the assistance of seven advanced students from the sociology department of the University. Questions were modified, taking into account responses of students on the pretest and a query at the end of the questionnaire as to which items were troublesome. Further refinements consisted of reading the questionnaire to five other students and observing their responses to the items. A professor of Spanish grammar and literature checked the questionnaire for grammatical correctness and clarity of expression.

English Translation

Since the analysis and discussion of questionnaire results were to be undertaken in English, it was essential that a translation of the Spanish version be as equivalent as possible to the survey items. The English translation was developed by the researcher who has more than three years of working knowledge of the Spanish language in Venezuela. It was checked item-by-item with a bilingual professor in the University. A second control consisted of a bilingual student reading only the English translation of the questionnaire, translating the items into Spanish before checking the correctness of the Spanish version of the survey instrument. The English translation contains free translations when equivalents could not be found.

SELECTION OF SAMPLE

The sample design had to take into account the following basic considerations: the desire to have a sample representative of all departments and years of study within the University, and the necessity to keep the questionnaire anonymous -- this was especially important given the sensitivity of students to questions on politics.

A probability sample would have required posting lists or individually citing students to appear in an assembly. These procedures would have destroyed the anonymity of the questionnaire as well as given rise to general discussion of the survey before its application -- most likely having a strong contamination effect. In view of the independence of the students and their heavy academic load, the probability of large numbers voluntarily attending at determined hours to complete a questionnaire was extremely remote.

Another possibility, applying the questionnaire to all students in the University on the same day, was not feasible. There was no single day nor time when all students would be attending class. To have applied the questionnaire to all students over a period of days would have required massive disruptions and great duplication, with students being confronted with the questionnaire on several occasions. The magnitude of the effort furthermore would have required more trained personnel than was available.

Our best strategy was to administer the questionnaire to a representative sample of required classes for students of a discipline and year. Two exceptions were second year administration students and preclinical medical students, where in each case the number exceeded 100. One hundred and fifty-eight administration students were divided systematically into three sections by the department on the basis of the first letter of the family name. The decision was made to randomly select one of the administration sections; and in medicine, to randomly draw (our only instance) thirty names from a list of 146 second and third year students.[4]

The Basic Studies Program in Cumaná had approximately 1,900 freshmen students, some three-fourths enrolled in the science curriculum and one-fourth in the humanities. At the time of enrollment freshmen students were alphabetically divided by the University into 20 sections (17 in science and three in humanities). We randomly selected three science sections and one humanities section.[5]

With the exception of pre-engineering students, all second year "Cursos Básicos" programs had small enrollments. We, therefore, randomly selected two of the four engineering sections, while we attempted to include in our sample all second year students in basic and applied science programs.

Altogether some 900 students completed the questionnaire. Our sample represents 21 per cent of the students in the Basic Studies Program ("Cursos Básicos") and 58 per cent of the students in professional schools (see Table I-1).

Although the proportion of certain groups within the sample diverges somewhat from the total university population, we do not believe that these differences distort the survey findings. The proportion of males and females in the sample is almost identical to the population (see Table I-2). With regard to the percentage distribution of age

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[4] Each student was assigned a number, and a table of random numbers was used to select the subjects.

[5] The procedure of random selection involved drawing chits from a hat. Two of the twenty sections were excluded on the grounds that students in these sections constituted the pretest sample.

TABLE I-1

Selection of a Sample

Basic Studies Program

Sample	Population
377 (21%)	1,867 (100%)

Professional Schools[a]

Sample	Population
510 (58%)	873 (100%)

All Departments -- Both Cycles[b]

Sample	Population
878 (33%)	2,765 (100%)

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[a] A new specialty, technical-vocational education with 25 advanced students was omitted from the study.

[b] Excluded are students in the three-year middle-level course to train technicians in Puerto La Cruz.

TABLE I-2

Representation of Sex and Age Groups in Sample

Sex	% of Sample	% of Population
Male	71.4%	71.8%
Female	28.6%	28.2%

Age	% of Sample	% of Population
19 and less	22.5%	32.5%
20 to 25	69.2%	60.4%
Over 25	8.3%	7.3%
	100%	100%
Number of Cases	(887)	(2,765)

groups, we observe in Table I-2 that the younger age group, nineteen years and less, was undersampled by nine per cent. Our reason in underrepresenting this group, and particularly students eighteen-years-old and younger, was that these were beginning students, a large percentage of whom would not complete the first year of "Cursos Básicos." Similarly, in Table I-3B, we observe that particularly administration and to a lesser extent medical students are underrepresented during the advanced cycle. As we mentioned above, the drop out rates for these students in the first year of professional study were expected to be higher than in other fields.

ADMINISTRATION OF QUESTIONNAIRE

The decision was made to apply the questionnaire in classes without any previous warning to students. Our rationale was that this procedure would minimize previous discussion of the study as well as expectations being built up over the nature of the questionnaire and how to answer it. There was also a tendency for students to consider the application of a questionnaire as a "holiday" or nonrequired class with the consequence that many might not appear.

The mechanics of applying the questionnaire involved the class professor usually being present during the first few minutes of the hour to maintain order. In classes over ten students, at least two advanced sociology students distributed the questionnaire and gave a brief introductory explanation in which they emphasized the scientific nature of the study and its anonymity. The student assistants further explained that the study was concerned with gathering student opinions on diverse aspects of university life as well as the future roles they aspired to play in Venezuelan society; the data gathered from the survey would then be utilized as part of an independent evaluation of the University of Oriente. This information was also contained in an introductory cover sheet to each questionnaire. Where appropriate with advanced students, the assistants mentioned that the study was part of a doctoral dissertation in the sociology of education.

The teams of assistants were balanced to include a member of each sex. The political affiliations of the students also were taken into account. No team consisted of two members who could be identified as belonging to the same political party or orientation. The researcher remained in the background, applying the questionnaire only when no student assistant was available.

In addition to administering the questionnaire, the student assistants answered any questions that arose concerning the different

TABLE I-3A

Sample of Students for Cycle of Professional Studies

DEPARTMENTS	SAMPLE	POPULATION
Administration	58 (32%)	182 (100%)
Animal Husbandry	44 (90%)	49 (100%)
Engineering:		
Agricultural	26 (63%)	41 (100%)
Chemical-Electrical-Mechanical[a]	100 (75%)	133 (100%)
Geological-Mining-Petroleum (Natural Resources)	29 (78%)	37 (100%)
Medicine	95 (42%)	225 (100%)
Sciences and Education:[b]		
Biology-Biology Education	43 (77%)	56 (100%)
Chemistry-Chemistry Education	20 (80%)	25 (100%)
Mathematics-Physics Mathematics-Physics Education	46 (83%)	56 (100%)
Social Sciences	49 (71%)	69 (100%)
TOTAL	510 (100%)	873 (100%)

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[a] Chemical, electrical, and mechanical engineering students are grouped together, because they undergo a common two-year program in "Cursos Básicos" and continue to Puerto La Cruz, where they share the same facilities. These are relatively new specialties at the University, and their distinctive features have not sufficiently crystallized to the point that studying them together distorts their individual characteristics.

[b] Students in the pure science and science education programs are often indistinguishable. The curricula of the two programs overlap, and most education students continue in a science specialization for a second degree after obtaining an education degree at the end of four years.

TABLE I-3B

Proportional Representation of Departments for Cycle of Professional Studies

DEPARTMENTS	Proportion of Sample	Proportion of Population
Administration	11.4%	20.8%
Animal Husbandry	8.6%	5.6%
Engineering:		
Agricultural	5.1%	4.7%
Chemical-Electrical-Mechanical	19.6%	15.2%
Geological-Mining-Petroleum	5.7%	4.2%
Medicine	18.6%	25.8%
Science and Education:		
Biology-Biology Education	8.4%	6.4%
Chemistry-Chemistry Education	3.9%	2.9%
Mathematics-Physics Mathematics-Physics Education	9.0%	6.4%
Social Sciences	9.6%	7.9%
TOTAL	100%	100%
(Number of Cases)	(510)	(873)[a]

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[a] Excluded are 25 students in technical-vocational education.

items. The assistants had worked on the construction of the questionnaire for over a month and were well briefed as to which items might occasion problems.

When subjects handed in the questionnaire, the assistants briefly leafed through the instrument, checking if the items constituting the attitude scales and several other key variables had been answered. If a subject objected to this procedure, it was discontinued.

The "questionnaire literacy" of most students in the sample was sufficiently high to make the study feasible. Freshman students had taken a battery of achievement and aptitude tests several months previously during their incoming orientation week. In their course work, they had been subjected to a variety of tests. Advanced students at one time or another had completed a brief questionnaire or personal inventory for the Orientation Service, or some evaluative instrument of their courses. These students had developed considerable skill in test taking -- a prerequisite to survival in the University.

In our pretesting of the initial questionnaire and its subsequent elaborations, we had attempted to construct a survey instrument relevant and interesting to the students' outlook as well as easy to complete. Although the questionnaire was long -- twenty-eight pages with one hundred and forty items -- the majority of students in our pretest were able to complete the instrument within sixty to seventy-five minutes with no major difficulty.

Two classroom hours were necessary to permit most students to complete the questionnaire without interruption. Where possible, a two-hour course was chosen for the application, or an hour course followed by a free period.

In all cases advance permission was sought and received from professors whose classes would be interrupted. Permission was facilitated by a letter sent from the Rector of the University to the different campus and school directors who then requested all departments to cooperate with the study. Generally, professors were both cooperative and interested in the study.

An elaborate schedule was worked out to apply the questionnaire on the Cumaná campus first. The researcher would then travel to the other campuses with several students to complete the survey. Unfortunately, a campus-wide student strike in Cumaná broke out unexpectedly several days before the questionnaire was to be applied, and classes were suspended for what might have been the remainder of the semester.

The strike, ostensibly over poor transportation facilities, had strong political overtones. As 1968 was a year of national elections in Venezuela, each student political group was interested in capitalizing on the strike to gain votes for themselves and thus win control of the student center. Victory for the local youth branch would be indirectly a victory for the national political party with which it was allied.

The different student political groups vied with one another in the demands they placed on the University administration -- the most extreme groups advocating a total strike to paralyze the University indefinitely.

The decision was made to go immediately to the other campuses and administer the questionnaire to as many students there as possible, then return to Cumaná, when and if classes resumed. Thus, the questionnaire was first applied to geology and mining engineering students in Ciudad Bolívar, then to animal husbandry and third year agricultural engineering students in Jusepín. Application of the instrument in the School of Medicine (Ciudad Bolívar) had to be suspended for a month in order not to conflict with a survey being conducted by the Sanitary Office of the Pan American Union on medical students in Latin America.[6]

Word was received in Jusepín that classes in Cumaná would resume ten days after the strike had begun. The two most powerful student groups had formed a temporary coalition to end the strike -- fearing that if the strike continued, the extremists would dominate the political situation on campus. At the same time the administration indicated its willingness to negotiate the more reasonable demands made by the student groups. A majority of students then voted in an all-campus assembly to return to classes.

The questionnaire was applied on the Cumaná campus exactly one week later than it had been scheduled. The teams of sociology students were able to apply the questionnaire to over 500 students in a two-day period. With few exceptions, the Cumaná survey was completed within the scheduled time span.

Because the strike had disrupted our schedule of visits to other campuses, several departments were missed that had to be reached at a later time. Engineering students were eventually included on subsequent trips by the researcher to Puerto La Cruz.

In the case of advanced agricultural engineering students at the more distant Jusepín campus, the decision was made to have the head of the Office of Student Services, a trained psychologist, apply the questionnaire in his vocational orientation course or in his office. The completed questionnaires were then delivered in the inter-campus mail pouch to Cumaná.

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[6] The survey of the Pan American Union was sufficiently dissimilar to our study so as not to have a contamination effect.

The School of Medicine was visited over a month later. Four days were required to apply the questionnaire to preclinical (2nd and 3rd year) and clinical (4th through 6th year) students both in the medical school and the nearby training hospital. The major problem was in locating sixth year students who did not attend classes and were on full-time duty in the hospital.

The sixth year students were alphabetically divided into two groups, which rotated among the different wards of the hospital. With the assistance of the senior obstetrics professor, the researcher was able to apply the questionnaire to the group working in the obstetrics ward. The other group, assigned to surgery, was exceptionally difficult to reach and, therefore, did not receive the questionnaire. Since there did not appear to be any systematic differences between the two groups, the exclusion of the six students temporarily working in surgery should not bias our findings.

Although the strike disrupted our schedule, creating a number of delays and inconveniences, it does not seem to have unduly influenced responses to most items on our questionnaire. The one item that most reflects the conflict on the Cumaná campus was an open-ended query soliciting criticisms of student services and other aspects of the University. Not unexpectedly, transportation was almost unanimously (and justifiably) mentioned as a problem.

The "University Integration Scale," the principal measure of attitudes toward attempting changes within the University of Oriente, should be our most sensitive indicator of the extent to which student opinions were affected by the strike. Yet, the differences in outcomes on this measure among different departments in the entire University are neither substantively nor statistically significant.

Generally, attendance rates were normal for students in Cumaná, following the strike. Very few students were absent from "Cursos Básicos" classes. Although attendance rates as a rule tend to be less regular among advanced students (because of their greater independence), no major deviation appears to have occurred. In most cases, the number of students completing the questionnaire in a particular course was checked against class lists.

Since our procedure involved the loss of one or two hours of class time, and the academic schedule was very tight, the only way to reach advanced students in several courses was to request that they meet at a specially convened hour after their classes. This procedure became necessary with fourth year electrical engineering and fifth year petroleum engineering students. The groups were small (19 and 14 respectively) and of the 33 students, 28 appeared as scheduled to complete the questionnaire.

Perhaps the greatest error in judgment occurred with fifth year agricultural engineering students in Jusepín. Instead of applying the questionnaire in class, these students were individually called to the Office of Student Services by the head psychologist to fill out the survey instrument. Apparently, there was no adequate explanation of the purposes of the study to this group, and a number of students feared that the University might use the data gathered in the questionnaire to their detriment. (The campus is small and isolated, and the students could be easily identified from their biographical data.)

The Director of Student Services at Jusepín sensing opposition decided against pressing the issue. Only five out of the 18 last year agricultural engineering students completed the questionnaire. Our sample of this group, therefore, was not adequately representative. However, we were able to obtain 21 of the 23 third and fourth year students.

In our analysis of the survey data, we explored how underrepresentation of these fifth year students would influence results for the department. We assumed from their refusal to participate in the study that they would be negative in their evaluations of the school. Our sample of agricultural engineering subjects, together with medical students, constitutes one of the most dissatisfied groups in the entire University (see Appendix IV-2). The addition of the remaining fifth year students most likely would have led to lower levels of overall satisfaction for the specialization.

The resistance of the agriculture students confirmed our initial reasons for wishing to maintain the anonymity of the respondent. Although anonymity was not the only factor involved in gaining the confidence of the students, it was an essential condition for obtaining honest responses to the questionnaire items.

QUANTIFICATION OF THE DATA

Questionnaires were coded at the University of Oriente over a two-month period with the assistance of the seven research assistants assigned to the project. The majority of items in the questionnaire were of the closed-alternative type and were precoded. Codes were devised for the open-ended questions utilizing a variety of techniques described in detail in Oppenheim (1966, pp. 227-48).

Coding began after the sociology students and the researcher had reached an intercoder reliability of greater than .90. Approximately one hundred and twenty-five questionnaires were coded a week, the researcher coding the greater part as he worked full-time on the project. At the end of each week, ten per cent of the questionnaires were randomly selected and checked a second time against their coding sheets.

Data were transcribed from coding sheets to punch cards at the IBM Center in Cumaná. Punching errors were minimized by checking two or three columns randomly on every card.

A complete set of punch cards and a code book were left at the IBM Center in Cumaná and with the Planning Office in Puerto La Cruz. The data have since been independently used by other researchers at the University of Oriente.

ANALYSIS

Although the researcher initially used an IBM counter sorter to process the data in Venezuela, the major data runs were made on the IBM 360/67 at the Stanford Computation Center. A tape file was generated using the SPSS (Statistical Package for the Social Sciences) developed at Stanford by Nie and Hull (1968). The SPSS is an especially flexible package of different statistical programs, which the researcher used for running marginals and cross-tabulations as well as performing a number of variable transformations in recoding variables and creating indexes.

Multivariate analysis of the type described by Kendall and Lazarsfeld (1960) has been used throughout the study. Our explanatory analysis of the relationships between predictor and dependent variables was illustrated by the use of bivariate and multivariate contingency tables. Although cross-tabulations lack the summary power of a single statistic, they are more dramatic in illustrating variations on the dependent variable in relation to the different independent variables, individually and in combination.[7] For example, we first studied levels of professional efficacy by departmental prestige and satisfaction with teachers and grades separately, then, in relation to the two variables simultaneously (see Chapter III).

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[7] The researcher is indebted to Dr. W. Paisley of the Stanford University Communication Department for several points discussed in this section.

Contingency tables were appropriate to the analysis, considering that one of our most important independent variables was field of study, a nominal category. Because of the nonparametric nature of much of the data, the chi-square test of significance was used with the contingency tables. However, as Blalock (1960) suggests in his discussion of the limitations of the chi square -- "A difference may be statistically significant without being significant in any other sense" (p. 227). Our focus was on the percentage differences between high and low ranking groups on the efficacy scales, as an indication of the relationship between our dependent variables and predictor variables.

Control variables were introduced in the analysis to test for "spuriousness" -- that is, an original relationship between two variables which is accounted for by a third variable. We found, for example, that the relationship between professional efficacy and political activism was subsumed by the third variable of political efficacy (see Chapter VI).

Introduction of control or test factors was further utilized to specify and interpret the conditions and contingencies influencing the original relationships between variables. Although departmental prestige and student satisfaction with teachers and grades are negatively correlated, the two predictor variables independently and cumulatively have a positive effect on professional efficacy. In examining the combined effect of the twin efficacies on third variables, we noted that political efficacy was more substantially associated with professional militancy while professional efficacy was the stronger of the two variables in predicting disagreement with resort to civil disobedience (see Chapter VIII). By running a number of three-variable tables, we found that the two efficacies (professional and political) are substantially interrelated but differently expressed in the occupational and political realms.

In our analysis, we continually encountered the problem of causal inference. We indirectly attempted to establish a case for our hypotheses by showing that a pattern existed for our independent variables to cluster together and predict variations on the dependent variables. In certain relationships, the antecedence of the predictor variables was more evident, and a positive association between variables strengthened the argument. The structure and process of our argument was built up gradually, testing the effects of one or two summary predictor variables (departmental prestige and interaction-rewards) on professional efficacy; then, we turned to an examination of the predictors and correlates of political efficacy. The general configuration of relationships which eventually emerged is presented in Figure 6-1.

Another important step in the explanatory analysis was to examine the validity of counter explanations or rival hypotheses. Chapter VII illustrates the process by which we studied two counter explanations of student activism -- that it is a resultant of a) frustrated commitment within the University, and b) status inconsistency in the larger society. The data failed to substantiate these rival arguments. We reasoned that a stronger case existed for viewing student involvement in politics as being an expression of optimism and confidence about one's future role in society.

The analysis was also concerned with the general reliability of the data. As reviewed earlier in the appendix, considerable precaution was exercised in attempting to construct valid and reliable measurements of the dependent variables of professional and political efficacy. Subsequent intercorrelation of items constituting the Likert-type scales further established their internal consistency. Intercorrelation matrices of variables that were expected to cluster together on dimensions -- such as academic commitment, satisfaction with teachers and grades, or political interest and participation -- reveal a high level of consistency between items in the questionnaire.

Data from a variety of sources -- university files and documents, previous research, and complementary surveys -- served as external validity checks on student responses to the questionnaire items. The additional information gathered on different aspects of teachers and students as well as alumni provided insights and refinements to the main body of survey data.

The findings from the questionnaire parallel those of other studies. For example, the Orientation Service applied a Spanish version of the Mooney Inventory of Personal Problems to approximately 250 university students in 1966. Problems checked by students in such departments as medicine and agricultural engineering are strikingly similar to those mentioned in our questionnaire: medical students are dissatisfied with their academic environment, and agriculture students are uncertain about their professional future. This convergence of findings supports the reliability of our survey instrument.

No less important were divergent findings. We observed in the School of Medicine the tendency for students to negatively evaluate their teachers' competence, when in fact criteria indicate that they are generally competent. Divergent findings of this nature lead to creative insights and stimulate further inquiry.

The strength of our analysis ultimately depends on what Selltiz et al. (1964) consider to be the "coherence and consistency of many bits of fallible evidence, the articulation of theory, and the interlocking of individually fallible bits of evidence with theory." "The scientist can, at most, aspire to the soundest conclusions that can be reached in the light of the best evidence that can be brought to bear on any issue" (p. 544). Recognizing the limitations of our study, we believe the evidence does build into a coherent and consistent pattern that articulates with theory.

APPENDIX I

Table I-4A

Item Discrimination Analysis of Upper and Lower Scoring Groups on Professional Efficacy Scale

M = Men only

"PROFESSIONAL EFFICACY SCALE" ITEMS:	MEAN SCORES		DISCRIMINATORY POWER	
	Upper 25% N=23, M	Lower 25% N=23, M	Differences between means of sub-groups	Critical[a] Ratio (C.R.)
Influence is more important than my professional capacities in order to get a good job.	3.36	1.63	1.73	2.02
I don't have a clear idea of my future work.	3.18	1.54	1.64	1.87
Many people really don't understand what my profession is.	2.68	1.77	.91	1.82
It will be difficult for me to get a job, because of the competition I am going to encounter.	3.77	1.86	1.91	2.08
Luck plays an important role in attaining my professional aspirations.	3.27	1.68	1.59	1.93

[a] $$\text{C.R.} = \frac{M\ \text{high} - M\ \text{low}}{\sqrt{\dfrac{\sigma^2\ \text{high} + \sigma^2\ \text{low}}{n}}},$$

where M is the mean of the high and low scoring groups,
σ^2 is the variance of the two sub-groups, and
n is the number of respondents in each group;
see Green (1954, pp. 351-52).

APPENDIX I

Table I-4B

Item Discrimination Analysis of Upper and Lower Scoring Groups on University Integration and Political Efficacy Scales

M & W = Men and Women

SCALES AND ITEMS	MEAN SCORES		DISCRIMINATORY POWER	
	Upper 25% N=32, M & W	Lower 25% N=32, M & W	Difference between means of sub-groups	Critical Ratio (C.R.)
"UNIVERSITY INTEGRATION SCALE": The students don't have effective means to make reforms within the University of Oriente.	3.00	1.56	1.44	2.18
It's not worthwhile trying to influence the university authorities, since nothing is going to change.	3.31	1.50	1.81	2.74
My vote has importance in the elections of the student center.	3.50	1.65	1.85	2.39
The university authorities don't take into account what people like me have to say.	3.21	1.96	1.25	1.82
When I have complaints about the university, I know what steps I ought to take.	3.00	1.50	1.50	1.79
"POLITICAL EFFICACY SCALE": Through my activities I can influence the political process of the country.	2.75	1.12	1.63	2.87
Voting is an effective way to influence the political process of the country.	3.87	2.37	1.50	1.79
Sometimes politics and government seem so complicated that a person like me can't really understand what is going on.	2.62	1.46	1.16	2.46
People like me don't have anything to say about what the government does.	3.59	1.68	1.91	2.57
Politicians really aren't interested in the opinions of people like me.	2.78	1.28	1.50	2.53

APPENDIX I

Table I-4C

Phi Coefficient (Φ) and Chi Square (χ^2) Results for Items Forming the Professional Efficacy Scale[a]

		ITEMS			
		2	3	4	5
	1	$\Phi = +.49$ $\chi^2 = 21.51^{**}$	$\Phi = +.16$ $\chi^2 = 2.23$	$\Phi = +.29$ $\chi^2 = 7.54^{**}$	$\Phi = +.28$ $\chi^2 = 6.62^{**}$
ITEMS	2		$\Phi = +.27$ $\chi^2 = 6.12^{**}$	$\Phi = +.41$ $\chi^2 = 14.99^{**}$	$\Phi = +.26$ $\chi^2 = 5.83^{**}$
	3			$\Phi = +.22$ $\chi^2 = 4.29^{**}$	$\Phi = +.16$ $\chi^2 = 2.14$
	4				$\Phi = +.86$ $\chi^2 = 67.20^{**}$

**Chi square test significant at .05 level

N = 91 (Male subsample only)

"PROFESSIONAL EFFICACY SCALE":

1. Influence is more important than my professional capacities in order to get a good job.
2. I don't have a clear idea of my future work.
3. Many people really don't understand what my profession is.
4. It will be difficult for me to get a job, because of the competition I am going to encounter.
5. Luck plays an important role in attaining my professional aspirations.

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[a] In order to compute the Phi coefficient, responses to the Likert-type items were dichotomized into high efficacy and low efficacy answers.

APPENDIX I

Table I-4D

Phi Coefficient (Φ) and Chi Square (χ^2) Results for Items Forming the University Integration Scale

ITEMS

ITEMS	2	3	4	5
1	$\Phi = +.43$ $\chi^2 = 17.10^{**}$	$\Phi = +.10$ $\chi^2 = .754$	$\Phi = +.38$ $\chi^2 = 13.44^{**}$	$\Phi = +.20$ $\chi^2 = 3.81$
2		$\Phi = +.16$ $\chi^2 = 2.27$	$\Phi = +.57$ $\chi^2 = 29.68^{**}$	$\Phi = +.42$ $\chi^2 = 15.90^{**}$
3			$\Phi = -.39$ $\chi^2 = 14.17^{**}$	$\Phi = +.43$ $\chi^2 = 16.95^{**}$
4				$\Phi = +.38$ $\chi^2 = 13.32^{**}$

**Chi square test significant at .05 level

N = 91 (Male subsample only)

"UNIVERSITY INTEGRATION SCALE":

1. The students don't have effective means to make reforms within the University of Oriente.
2. It's not worthwhile trying to influence the university authorities, since nothing is going to change.
3. My vote has importance in the elections of the student center.
4. The university authorities don't take into account what people like me have to say.
5. When I have complaints about the university, I know what steps I ought to take.

APPENDIX I

Table I-4E

Phi Coefficient (Φ) and Chi Square (χ^2) Results for Items Forming the Political Efficacy Scale

ITEMS	2	3	4	5
1	$\Phi = +.17$ $\chi^2 = 2.40$	$\Phi = +.53$ $\chi^2 = 25.39^{**}$	$\Phi = +.30$ $\chi^2 = 7.56^{**}$	$\Phi = +.34$ $\chi^2 = 10.47^{**}$
2		$\Phi = +.04$ $\chi^2 = 1.20$	$\Phi = +.10$ $\chi^2 = .80$	$\Phi = +.32$ $\chi^2 = 9.15^{**}$
3			$\Phi = +.34$ $\chi^2 = 10.87^{**}$	$\Phi = +.19$ $\chi^2 = 3.06$
4				$\Phi = +.38$ $\chi^2 = 13.24^{**}$

**Chi square test significant at .05 level

N = 91 (Male subsample only)

"POLITICAL EFFICACY SCALE":

1. Through my activities I can influence the political process of the country.
2. Voting is an effective way to influence the political process of the country.
3. Sometimes politics and government seem so complicated that a person like me can't really understand what's going on.
4. People like me don't have anything to say about what the government does.
5. Politicians really aren't interested in the opinions of people like me.

APPENDIX I

Table I-5

Phi Coefficient (Φ) and Chi Square (χ^2) Results for Items Forming the Activism Scale

ITEMS		2	3	4
ITEMS	1	$\Phi = +.33$ $\chi^2 = 10.16^{**}$	$\Phi = +.35$ $\chi^2 = 11.26^{**}$	$\Phi = +.18$ $\chi^2 = 2.10$
	2		$\Phi = +.33$ $\chi^2 = 10.04^{**}$	$\Phi = +.23$ $\chi^2 = 4.21^{**}$
	3			$\Phi = +.50$ $\chi^2 = 22.30^{**}$

**Chi square test significant at .05 level

N = 91 (Male subsample only)

"ACTIVISM SCALE":

1. With things as they are today, an intelligent person ought to think only about the present, without worrying about what is going to happen tomorrow.
2. The secret of happiness is not expecting too much out of life, and being content with what comes your way.
3. It doesn't make much difference if the people elect one or another candidate for nothing will change.
4. Making plans only brings unhappiness because the plans are hard to fulfill.

APPENDIX I

Table I-6

Phi Coefficient (Φ) and Chi Square (χ^2) Results for Items Forming the Trust Scale

ITEMS

ITEMS	2	3	4
1	Φ = +1.00 χ^2 = 80.00**	Φ = +.42 χ^2 = 13.41**	Φ = +.15 χ^2 = 1.64
2		Φ = +.46 χ^2 = 17.57**	Φ = +.32 χ^2 = 8.09**
3			Φ = +.14 χ^2 = 1.43

**Chi square test significant at .05 level

N = 91 (male subsample only)

"TRUST SCALE":

1. You can only trust people whom you know well.
2. Most people will repay your kindness with ingratitude.
3. People help persons who have helped them not so much because it is right but because it is good business.
4. It is not good to let your friends know everything about your life, for they might take advantage of you.

APPENDIX I

Table I-7

Phi Coefficient (Φ) and Chi Square (χ^2) Results for Items Forming Integration with Relatives Scale

ITEMS

ITEMS	2	3
1	$\Phi = +.48$ $\chi^2 = 17.74$	$\Phi = +.16$ $\chi^2 = 1.97$
2		$\Phi = +.20$ $\chi^2 = 3.32$

**Chi square significant at .05 level

N = 91

"INTEGRATION WITH RELATIVES SCALE":

1. When you are in trouble, only a relative can be depended upon to help you out.
2. If you have the chance to hire an assistant in your work, it is always better to hire a relative than a stranger.
3. When looking for a job, a person ought to find a position in a place located near his parents, even if that means losing a good opportunity elsewhere.

APPENDIX I

Table I-8

Modifications in the Political Efficacy Scale of Campbell, Gurin, and Miller (1954)

1. I don't think public officials care much what people like me think.

_M_ 2. The way people vote is the main thing that decides how things are run in this country.

_E_ 3. Voting is the only way that people like me can have any say about how the government runs things.

4. People like me don't have any say about what the government does.

5. Sometimes politics and government seem so complicated that a person like me can't really understand what's going on.

_M_ - Substantive modification in item from the original scale

_E_ - Item eliminated from original scale

APPENDIX I

Table I-9

Modifications in the Activism, Trust, and Integration with Relatives Scales of Kahl (1965)

TRUST

Mexico	Brazil	
−.66	−.78	It is not good to let your relatives know everything about your life, for they might take advantage of you. (E)
−.71	−.74	It is not good to let your friends know everything about your life, for they might take advantage of you.
−.67	−.55	Most people will repay your kindness with ingratitude.
+.38		Most people are fair and do not try to get away with something. (E)
−.62		People help persons who have helped them not so much because it is right but because it is good business.
−.40		You can only trust people whom you know well.

INTEGRATION WITH RELATIVES

+.73	+.76	When looking for a job, a person ought to find a position in a place located near his parents, even if that means losing a good opportunity elsewhere.
+.78	+.75	When you are in trouble, only a relative can be depended upon to help you out.
+.65	+.64	If you have the chance to hire an assistant in your work, it is always better to hire a relative than a stranger.

ACTIVISM

Mexico	Brazil	
−.63	−.74	Making plans only brings unhappiness because the plans are hard to fulfill.
−.58	−.65	It doesn't make much difference if the people elect one or another candidate for nothing will change.
−.67	−.63	With things as they are today, an intelligent person ought to think only about the present, without worrying about what is going to happen tomorrow.
−.54	−.57	We Brazilians (Mexicans) dream big dreams, but in reality we are inefficient with modern industry. (N)
−.61	−.47	The secret of happiness is not expecting too much out of life, and being content with what comes your way.
+.46		It is important to make plans for one's life and not just accept what comes. (N)
+.41		How important is it to know clearly in advance your plans for the future? (E)

(E) = Excluded from present questionnaire

(N) = Not used in present questionnaire

Note: A fourth questionnaire used by Kahl to measure Achievement Orientation, "Occupational Primacy", was not used for the purposes of the present survey.

APPENDIX II

CONSTRUCTION OF AN INDEX OF SOCIOECONOMIC STATUS

An index of socioeconomic status was constructed on the basis of family income as well as education and occupation of father. It was assumed that a combination of these three factors presents a more accurate profile of the students' family background.

We looked at family income rather than father's salary alone. This decision reflects the fact that unemployment rates are high in Venezuela (approximately 12 per cent of the labor force) and in about one-third of the cases a father may be long absent from the household or deceased.

We assigned points for each of the factors in the following way:

Family Monthly Income

Less than Bs. 600 = 1 point
Bs. 600-Bs. 1,999 = 2 points
Bs. 2,000-Bs. 3,999 = 3 points
Bs. 4,000 plus = 4 points

Education of Father

Primary (Incomplete or Complete) = 1 point
Secondary (Incomplete or Complete) = 2 points
Middle-Level Technical Courses = 2 points
University (Incomplete or Complete)= 3 points

Occupation of Father

Professional-Managerial and Executive-Inspectional, High Grade Nonmanual Work, and Large Scale Proprietor = 3 points

Skilled Manual and Nonroutine Grades of Nonmanual Work = 2 points

Semi-Skilled and Routine Manual Work = 1 point

In cases where the mother was head of the household, because the father was absent or dead, 1 point was assigned for mothers who attained a secondary level education -- mother's work being reflected in the item on total family income.

Total scores ranged from 1 to 11 points, with the following cutting points used:

Upper Class = 10 points plus
Upper Middle Class = 9 points
Middle-Middle Class = 7-8 points
Lower Middle Class = 5-6 points
Lower Class = 4 points and less

We decided that a low position on at least two of the three dimensions -- income, education, and occupation -- would signify lower class status. Lower middle class status represents families that fall at an intermediate position on two dimensions with the middle-middle group being required to attain a high position on at least one dimension and an intermediate position on two others. In order to attain middle upper and upper class status it is necessary to score high on all three factors.

The accuracy of the index was tested by cross-tabulating it with other variables considered to be fairly reliable indicators of socio-economic status of the students -- such as their monthly income and the extent to which they worry about economic problems. These cross-tabulations supported the validity of the measurement.

APPENDIX III-1A

CONSTRUCTION OF AN INDEX OF INTERACTION AND REWARDS

Eleven items which had served as indicators of our independent variables were intercorrelated. Five items that proved to have the highest internal consistency were then selected. Three items represent different dimensions of the student-teacher interaction process, that is, frequency of discussions with teachers, significance of teachers, and warmth of relationships; a fourth item refers to student satisfaction with the internal reward system of the University; and a fifth, to practical work experiences included in the curricular offerings. Points were assigned to subjects in the following way:

Item	2 Points for Response	1 Point for Response
1) Frequency of Talks with Professors Re Career Problems	Frequently	Sometimes
2) Satisfaction with Teacher Knowledge	Very Satisfied	Satisfied
3) Relations with Professors	Very Cordial or Cordial	Normal ("regular")
4) Satisfaction with Professor Fairness in Assigning Grades	Very Satisfied	Satisfied
5) Satisfaction with Practical Work Experiences in the Curriculum	Very Satisfied	Satisfied

No points were given when students were dissatisfied with grades, teachers' knowledge, and practical work experiences; when students reported infrequent discussions with teachers, or had poor relations with faculty. Similarly, students who expressed no opinion or were uncertain of their answer on these items received no points.

Composite scores were then computed for each individual and cutting points determined for classifying students as ranking high, intermediate, or low on the Index. Students receiving 2 points or less were

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classified in the low group; 20 per cent of the students placed in this category. Thirty-seven per cent had a total of 3 or 4 points and were assigned to the intermediate group. The remaining 43 per cent with a total of 5 or more points were rated as being high on the Index.

These cutting points reflect the generally high level of interaction and satisfaction with grades reported by most students. The cutting point for the low scoring group was also pegged quite low in order to permit students who did not respond to one or more items to attain an intermediate position on the Index by virtue of high scores on the remaining questions.

APPENDIX III-1B

CORRELATION MATRIX FOR ITEMS COMPOSING AN INDEX OF INTERACTION AND REWARDS

	Item 2	Item 3	Item 4	Item 5
Item 1	$X^2 = 8.7$ df = 6	$X^2 = 94.1$ df = 4 **	$X^2 = 16.2$ df = 6 **	$X^2 = 20.4$ df = 4 **
Item 2		$X^2 = 20.0$ df = 6 **	$X^2 = 76.5$ df = 9 **	$X^2 = 20.0$ df = 6 **
Item 3			$X^2 = 22.8$ df = 6 **	$X^2 = 25.2$ df = 6 **
Item 4				$X^2 = 2.0$ df = 6

**Chi Square significant at .01 level.

*Chi Square significant at .05 level.

Item 1: Frequency of Talks with Professors Regarding Career Problems. Response Categories: Frequently, Sometimes, Seldom or Never.

Item 2: Satisfaction with Professors' Knowledge. Response Categories: Very Satisfied, Satisfied, Dissatisfied, Very Dissatisfied.

Item 3: Students Relations with Professors. Response Categories: Very Cordial, Cordial, Normal, Distant-Reserved-Hostile.

Item 4: Student Satisfaction with Teachers' Fairness in Assigning Grades. Response Categories: Very Satisfied, Satisfied, Dissatisfied, Very Dissatisfied.

Item 5: Student Satisfaction with Practical Work Experiences in Curriculum. Response Categories: Very Satisfied, Satisfied, Dissatisfied, Very Satisfied.

APPENDIX III-2

INDEPENDENT SURVEY OF OCCUPATIONAL PRESTIGE

A systematic sample of thirty students in the Basic Studies Program ("Cursos Básicos) was drawn from University files. Twenty-seven students responded and answered a brief questionnaire in which they were asked to rate the different specializations offered by the University of Oriente on several dimensions: 1) global prestige in the society, 2) opportunities for employment, 3) remuneration, and 4) contribution to national development processes. The different specialties were rated on a five point scale with five representing the highest value and one the lowest. Averages were then determined for the departments on each of the above dimensions. The results for the item on global prestige follow:

Rank	Specialty	$\bar{X}$ Score on Global Prestige
1	Medicine	4.68
2	Electrical, Mechanical, and Chemical Engineering	4.52
3	Agricultural Engineering	4.15
4	Physics	3.99
5	Geological, Mining, and Petroleum Engineering	3.83
6	Chemistry	3.78
7	Biology	3.47
8	Sociology	3.31
9	Animal Husbandry	3.05
10	Administration	2.84

Although the number of students in the sample was small, this independent survey is offered as collateral evidence to support the general reliability of the intradepartmental ratings of occupational prestige (cf., Table III-13). A Spearman Rank-Order Correlation of departmental standings in this particular survey with those in the general survey is Rho = +.82.

The only major discrepancy in the different evaluations of departmental prestige is with regard to administration. Administration students tend to rate their field higher as there is a growing public demand for administrators both by industry and government agencies. These students, of course, are more sensitive to what they believe is an increase in the prestige of their field of Venezuelan society.

APPENDIX IV-1A

CONSTRUCTION OF AN INDEX OF COMMITMENT TO COMPLETING STUDIES

An index of commitment to completing university studies in a specialty was constructed, selecting items that partly relate to Becker's (1960) concept of commitment as a "side bet." According to Becker, the major elements of commitment involve 1) the individual being in a position in which his decision with regard to some particular line of action has consequences for other interests and activities, 2) he has placed himself in the present position by his own prior actions, and 3) the committed person must be aware that he has made the side bet and must recognize that the decision in this case will have ramifications beyond it (pp. 35-36).

The following five items constituting the index were selected after intercorrelating seven items believed to tap the above dimensions:

1) When was specialty selected?

2) If offered a choice, would the student enroll again in the same specialty?

3) Would the student leave the University for a good paying job?

4) What importance does the student attach to completing his university studies?

5) What sacrifices are involved for the student's family in his going to the University?

APPENDIX IV-1B

CORRELATION MATRIX OF THE ITEMS CONSTITUTING AN INDEX OF COMMITMENT TO COMPLETING STUDIES

	Item 2	Item 3	Item 4	Item 5
Item 1	$X^2 = 29.03$ df = 1 **	$X^2 = 8.28$ df = 3 *	$X^2 = 3.88$ df = 1	$X^2 = .80$ df = 3
Item 2		$X^2 = 10.13$ df = 3 *	$X^2 = 14.0$ df = 3 **	$X^2 = 3.84$ df = 3
Item 3			$X^2 = 64.75$ df = 9 **	$X^2 = 2.60$ df = 9 **
Item 4				$X^2 = 32.49$ df = 9 **

* Chi Square significant at .05 level

** Chi Square significant at .01 level

APPENDIX IV-2

RANKING OF DEPARTMENTS ON INDICATORS OF REWARDS, INTERACTION, AND PROFESSIONAL TASKS

Departments were ranked according to total number of points received for students scoring high on five indicators of rewards and interaction. Points were assigned in the following way:

Item	1 Point Assigned for Percentage of Students in Department Responding
1) Frequency of talks with professors re career problems	Frequently or sometimes
2) Satisfaction with professors' knowledge	Very satisfied or satisfied
3) Relations with professors	Very cordial or cordial
4) Satisfaction with teachers' fairness in assigning grades	Very satisfied or satisfied
5) Satisfaction with practical work experiences in curriculum	Very satisfied or satisfied

* * * *

Rank	High Rewards Departments	Cumulative Points
1	Biology	358
2	Mathematics-Physics	355
3	Administration	348
4	Animal Husbandry	339
5	Sociology	338
	Intermediate Rewards	
6	Chemistry	330
7	Chemical, Electrical, Mechanical Engineering	319
8	Natural Resources Engineering	313
	Low Rewards	
9	Agronomy	289
10	Medicine	280

APPENDIX IV-3

COMPARISON OF DEPARTMENTAL RANKINGS ON PRESTIGE AND INTERACTION-REWARDS

Rank on Prestige	Department	Rank on Interaction-Rewards
1	Medicine	10
2	Chemical, Electrical, Mechanical Engineering	7
3	Natural Resources Engineering	8
4	Agricultural Engineering	9
5	Chemistry	6
6.5	Mathematics and Physics	2
6.5	Administration	3
8	Biology	1
9	Animal Husbandry	4
10	Sociology	5

APPENDIX V-1A

CONSTRUCTION OF AN INDEX OF POLITICAL PARTICIPATION AND INTEREST

An index of nine items on student participation and interest in both university and national politics was constructed by intercorrelating an original pool of ten relevant items and selecting those items that were most frequently associated with one another. These items were: 1) leadership position in a student organization, 2) membership in a national or university based political party, 3) interest in the 1968 student election, 4) participation in the previous campaign of a student party to gain control of the student center, 5) participation in student protests, 6) frequency with which student discusses student politics and 7) national politics, 8) interest in the forthcoming national elections, and finally, 9) participation in the electoral campaign of a political party.

With the exception of Item 1, topics were assigned a weight of 2 points for high participation and interest or high frequency of discussion of politics; 1 point was assigned to subjects who indicated some interest or participation and occasional political discussions. Item 1 was weighted differently, since it referred to leadership position in any student organization. Although the majority of student positions are won in student elections and affiliated with the politically oriented student center, there are a number of positions primarily social, cultural and recreational by nature. For this reason, 1 point was assigned to subjects holding a leadership position in a student organization.

Cumulative scores were computed for subjects and cutting points were determined for assigning individuals to high, intermediate, and low scoring groups. The three groupings were roughly divided into quartiles. Subjects with less than 5 points comprise the low scoring group, representing 35% of the sample; 6 to 9 points place individuals in the intermediate group (34% of the sample); and students with more than 10 points are in the high ranking group (31%).

APPENDIX V-1B

Intercorrelation Matrix of Items Constituting an Index of Political Participation and Interest

	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9
Item 1	χ^2 = 103.80 df = 1 *	χ^2 = 71.58 df = 3 *	χ^2 = 68.53 df = 3 *	χ^2 = 31.81 df = 3 *	χ^2 = 21.56 df = 2 *	χ^2 = 24.85 df = 2 *	χ^2 = 29.05 df = 2 *	χ^2 = 30.10 df = 3 *
Item 2		χ^2 = 110.40 df = 3 *	χ^2 = 113.66 df = 3 *	χ^2 = 106.24 df = 3 *	χ^2 = 69.66 df = 2 *	χ^2 = 86.11 df = 2 *	χ^2 = 72.0 df = 3 *	χ^2 = 106.79 df = 4 *
Item 3			χ^2 = 257.59 df = 9 *	χ^2 = 214.30 df = 9 *	χ^2 = 142.24 df = 6 *	χ^2 = 96.86 df = 6 *	χ^2 = 202.23 df = 9 *	χ^2 = 68.91 df = 12 *
Item 4				χ^2 = 237.96 df = 9 *	χ^2 = 89.24 df = 6 *	χ^2 = 64.81 df = 6 *	χ^2 = 87.72 df = 9 *	χ^2 = 100.24 df = 12 *
Item 5					χ^2 = 97.08 df = 6 *	χ^2 = 87.14 df = 6 *	χ^2 = 129.28 df = 9 *	χ^2 = 82.8 df = 12 *
Item 6						χ^2 = 385.06 df = 4 *	χ^2 = 104.30 df = 6 *	χ^2 = 35.28 df = 8 *
Item 7							χ^2 = 103.66 df = 6 *	χ^2 = 40.43 df = 8 *
Item 8								χ^2 = 144.26 df = 12 *

*Chi square significant at .01 level

Item:	Categories:
1) Leadership Position in a Student Organization	Yes/No
2) Membership in a National or School Based Political Party--in High School or University	Yes/No
3) Interest in the Elections for Student Center	A lot/Some/Little/No Interest
4) Participation in Campaign of Student Party	A lot/Some/Little/No Activity/Not in University
5) Participation in Student Protests	A lot/Some/Seldom/Never
6) Frequency Discusses Student Politics	All the time/Several times a week/Several times a month/Seldom or never
7) Frequency Discusses National Politics	All the time/Several times a week/Several times a month/Seldom or never
8) Interest in the Forthcoming National Elections	A lot/Some/Little/No Interest
9) Participation in the Electoral Campaign of a Party	A lot/Some/Little/No Activity/Foreigner

TABLE V-1

Scores on Political Efficacy Scale by Integration with Relatives Scale of Kahl

		Independence		
		Low	Intermediate	High
Political Efficacy	High	26%	29%	44%
	Intermediate	50%	52%	46%
	Low	25%	19%	11%
		$X^2 = 34.82$	df = 4	$p < .001$
		100%	100%	100%
(Number of Cases)		(210)	(259)	(398)

TABLE V-2

Scores on Political Efficacy Scale by Activism Scale of Kahl

		Activism Scale		
		Low	Intermediate	High
Political Efficacy Scale	High	19%	24%	49%
	Intermediate	50%	54%	44%
	Low	32%	22%	7%
		$X^2 = 96.71$	df = 4	$p < .001$
		100%	100%	100%
(Number of Cases)		(159)	(302)	(407)

TABLE V-3

Scores on Political Efficacy Scale by Trust Scale of Kahl

		Trust Scale		
		Low	Intermediate	High
Political Efficacy Scale	High	31%	36%	47%
	Intermediate	50%	46%	51%
	Low	19%	18%	2%
		$X^2 = 20.18$	df = 4	$p < .01$
		100%	100%	100%
(Number of Cases)		(479)	(291)	(94)

TABLE V-4

Scores on Political Efficacy Scale by Family Agreement with Political Ideas of Student

		Family Agree	Family Disagree	Other-Don't Know
Political Efficacy	High	41%	35%	30%
	Intermediate	46%	49%	51%
	Low	13%	17%	20%
		$X^2 = 15.52$	df = 8[a]	$p < .05$
		100%	100%	100%
(Number of Cases)		(347)	(87)	(386)

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[a] Categories of family agree and disagree strongly and somewhat were collapsed into two categories.

TABLE VI-1

Political Efficacy by Satisfaction with University Training Experiences

		Position on Index of Interaction and Rewards		
		Low	Intermediate	High
Position on Political Efficacy Scale	High	29%	36%	37%
	Intermediate	51%	47%	49%
	Low	21%	17%	14%
		$X^2 = 5.57$	df = 4	$p > .05$
		100%	100%	100%
(Number of Cases)		(171)	(358)	(344)

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TABLE VI-2

Political Efficacy by Occupational Prestige

		Occupational Prestige		
		Low	Intermediate	High
Position on Political Efficacy Scale	High	33%	33%	37%
	Intermediate	47%	51%	47%
	Low	20%	16%	15%
		$X^2 = 3.48$	df = 4	$p > .05$
		100%	100%	100%
(Number of Cases)		(443)	(184)	(443)

TABLE VI-3

Percentage Scoring High on Index of Political Participation and Interest

(According to Relevance of Field)

		Political Efficacy Low	
		Low	High
Prestige of Field	High	13% (32)	11% (36)[a]
	Low	9% (45)	13% (32)

		Political Efficacy Intermediate	
		Low	High
Prestige of Field	High	31% (76)	31% (108)
	Low	18% (135)	29% (104)

		Political Efficacy High	
		Low	High
Prestige of Field	High	45% (75)	56% (87)
	Low	37% (89)	50% (52)

[a] Number of cases

APPENDIX VII-1A

CONSTRUCTION OF INDICES OF ACADEMIC AND OVERALL FACILITATION

An index of "academic facilitation" was constructed using two items: 1) students' perception of the extent to which academic problems could prevent them from graduating and 2) evaluations of the probability of graduating. The index of "overall facilitation" included these two items plus a third item on the probability of obtaining a desirable job. The correlation matrix for the three items is seen on the following page.

In determining whether students belong to high or low facilitation groups, answers to the different items were scored as follows:

1) Extent to which Academic Problems Could Prevent Students from Graduating: Very Little = 4 points/ A Little = 3 points/ Somewhat = 2 points/ A Lot = 1 point.

2) Probability of Completing Studies: Excellent = 4 points/ Good = 3 points/ Fair = 2 points/ Bad, Very Bad, Don't Know = 1 point.

3) Probability of Obtaining Desirable Job: Excellent = 4 points/ Good = 3 points/ Fair = 2 points/ Bad, Very Bad, Don't Know = 1 point.

A total of 6 points or more on the two items constituting the academic facilitation index places subjects in the high scoring group (51 per cent of the total sample). On the index of overall facilitation, a score of 9 points or more (25 per cent of the sample) places an individual in the high scoring group. These cutoff points are based on the absolute criterion, that an individual should obtain a minimum average of 3 points on each of the different items comprising the indices.

APPENDIX VII-1B

CORRELATION MATRIX OF ITEMS CONSTITUTING FACILITATION INDICES

	Academic Problems	Probability Find Job
Probability Complete Studies	$X^2 = 65.05$, df = 9 $p < .01$	$X^2 = 28.26$, df = 9 $p < .01$
Academic Problems		$X^2 = 18.60$, df = 9 $p < .05$

TABLE VII-1

Percentage Ranking High on Political Efficacy by Types of Committed Individuals

(% in each cell ranking high on political efficacy)

		Commitment	
		Low	High
Academic Facilitation	High	Type III 31% (176)	Type I 41% (262)
	Low	Type IV 31% (210)	Type II 35% (225)

[a] Number of cases on which percentage is based

TABLE VII-2

Percentage Ranking High on Political Participation and Interest by Status Consistency and Overall Facilitation

(% in each cell ranking high on political involvement)

		Status Consistent	
		No	Yes
Overall Facilitation	High	32% (69)	35% (146)[a]
	Low	27% (255)	30% (378)

[a] Number of cases on which percentage is based

TABLE VII-3

Percentage of Advanced Students Ranking High on Political Participation and Interest by Status Consistency and Overall Facilitation

(% in each cell high on political involvement)

2nd Cycle

		Status Consistent	
		No	Yes
Overall Facilitation	High	37% (51)	44% (89)[a]
	Low	34% (139)	34% (209)

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[a] Number of cases on which percentage is based

TABLE VIII-1

Percentage Reporting Strong Family Support for Career Choice according to Political and Professional Efficacy

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	67% (18)	63% (85)	66% (86)
	Intermediate	40% (60)	64% (206)	55% (148)
	Low	43% (68)	42% (126)	57% (14)

TABLE VIII-2A

Percentage Reporting They Would Protest Municipal Decision by a Group Visit according to Political and Professional Efficacy

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	100% (53)	98% (87)	91% (32)
	Intermediate	90% (29)	96% (99)	92% (32)
	Low	96% (27)	93% (59)	84% (32)

TABLE VIII-2B

Percentage Reporting They Would Protest Municipal Decision by Political Party Action and a Combination of Tactics according to Political and Professional Efficacy

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	0% (53)	2% (87)	9% (32)
	Intermediate	10% (29)	4% (99)	18% (87)
	Low	4% (270)	7% (59)	16% (32)

TABLE VIII-3

Percentage Who Would Militate Against Unfavorable Working Conditions according to Political and Professional Efficacy

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	56% (18)	71% (83)	81% (86)
	Intermediate	52% (60)	63% (206)	68% (149)
	Low	54% (67)	65% (127)	63% (63)

TABLE VIII-4

Percentage Disagreeing with Use of Violence to Change Political Situation in Country according to Political and Professional Efficacy

		Professional Efficacy		
		Low	Intermediate	High
Political Efficacy	High	47% (64)	40% (149)	48% (86)
	Intermediate	35% (127)	43% (207)	43% (84)
	Low	25% (68)	38% (60)	33% (18)

TABLE VIII-5

Percentage Disagreeing with Statement that People Should Disobey the Government according to Political and Professional Efficacy

		Professional Efficacy		
		Low	Intermediate	High
Political Efficacy	High	53% (62)	59% (204)	73% (86)
	Intermediate	44% (124)	66% (204)	70% (84)
	Low	44% (66)	57% (60)	53% (17)

TABLE VIII-6

Percentage Reporting They Have a Clear Concept of Future Professional Tasks They will Perform according to Political and Professional Efficacy

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	61% (18)	46% (85)	54% (85)
	Intermediate	27% (59)	39% (207)	46% (147)
	Low	28% (68)	29% (126)	32% (63)

TABLE VIII-7

Percentage Reporting Definite Geographical Preferences for Work Site according to Political and Professional Efficacy

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	56% (18)	48% (83)	58% (86)
	Intermediate	55% (60)	53% (206)	61% (146)
	Low	55% (67)	56% (126)	68% (63)

TABLE VIII-8

Percentage Specifying Achievement Characteristics as Being Important in Seeking a Job according to Political and Professional Efficacy[a]

		Political Efficacy		
		Low	Intermediate	High
Professional Efficacy	High	94% (18)	64% (83)	71% (86)
	Intermediate	43% (58)	47% (207)	50% (149)
	Low	39% (67)	50% (176)	44% (63)

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[a] Achievement characteristics include opportunities for the individual to advance by professional knowledge and gain recognition of professional colleagues.